

DETAILED INSPECTION CHECKLIST

FA SCSTMT TEXT

131 MARINE CORPS FUEL FACILITIES
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131 01 ORGANIZATION AND RESPONSIBILITIES

131 01 001 ORGANIZATION

Is the Fuel Division (government), organized as shown in Figure 8-1, or is the contractor (GOCO/COCO) similarly organized as listed in 8-2?
Reference
NAVAIR 00-80T-109, PAR 8-1 AND 8-2

131 01 002 PERSONNEL

Does the Fuel Division have personnel in adequate quantities and with sufficient grade structure, training, and seniority to ensure responsible operation of facilities and equipment in response to the maximum projected operational demand?
Reference
NAVAIR 00-80T-109, PAR 8-1

131 01 003 RESPONSIBILITIES - SUPPLY OFFICER

Does the Supply Officer know that he/she is responsible for:

- (1) Budgeting?
- (2) Receipt?
- (3) Storage?
- (4) Accountability?
- (5) Issues?
- (6) Quality assurance?
- (7) Environmental impact of petroleum products?
- (8) Preventive maintenance of systems and facilities?

Reference
NAVAIR 00-80T-109, PAR 8.1; NAVFAC MO-230, PAR 1.1.4.7

131 01 004 RESPONSIBILITIES - PUBLIC WORKS OFFICER

A. Does the Public Works Officer know that he/she is responsible for performing corrective maintenance of fuel-related facilities that, in the

DETAILED INSPECTION CHECKLIST

opinion of the Fuel Officer, are beyond the capability of his own personnel? Systems/facilities and support includes:

- (1) Fuel storage tanks?
- (2) Piping?
- (3) Receiving facilities?
- (4) Shipping facilities?
- (5) Waterfront structures?
- (6) Quality surveillance?
- (7) Roads?
- (8) Electrical systems?
- (9) Fire protection systems?

B. Does the Public Works Officer know that he/she is responsible for assisting the Fuel Officer in developing, maintenance budgets and preparing estimates and recommendations for construction, maintenance, repair, and other projects required for continued operation of the fuel facility?

Reference

NAVFAC MO-230, PAR 1.1.4.7

131 01 005 RESPONSIBILITIES - SECURITY OFFICER (Also see Part 15, Security)

Is the Security Officer appointed in writing by the Commanding Officer of the Installation directing that all security requirements are in accordance with the reference?

Reference

MCO 5530.14A, PAR 7, PG 13

131 01 006 RESPONSIBILITIES - FUELS MANAGEMENT OFFICER (FMO)

A. Does the FMO perform and is responsible for:

- (1) Estimating fuel quantities and service requirements? (1)
- (2) Developing fuel budgets? (1)
- (3) Contract administration? (1)
- (4) Prepares oil spill prevention and countermeasure plan? (1)
- (5) Prepares environmental impact statements? (1)
- (6) Performs liaison with fuel service customers, activities etc.? (1)
- (7) Represents fuel interests on boards and committees? (1)
- (8) Identifying to the Public Works Officer (PWO), or other appropriate official, all corrective repair actions that must be accomplished on fuel facilities, systems, and equipment outside of the immediate fuels organization? (2)
- (9) Developing and coordinating a preventive maintenance program that addresses all fuel storage facilities and dispensing equipment? (2)
- (10) Coordinating grass cutting and general area maintenance? (2)

DETAILED INSPECTION CHECKLIST

(11) Initiating and monitoring necessary military construction and other fuel related projects? (2)

B. Does the FMO know that he/she is the decision-making authority on any fuel-related issues/operations that are unique not clearly defined or not covered by directives? (4)

C. Is the FMO thoroughly familiar with OPNAVINST 5090.1, Environmental and Natural Resources Protection Manual? (3)

D. Does the FMO maintain a complete library of all publications required to perform his/her duties?

Reference

(1) MIL-HDBK-844A (AS), PAR 4.1.3.1(2) NAVAIR 00-80T-109, PAR 8.1.1; (3) NAVAIR 00-80T-109, PAR 12.2.1.4; AND (4) NAVAIR 00-80T-109; PAR 1.4.3

131 01 007 RESPONSIBILITIES - ASSISTANT FMO (AFMO)

Does the AFMO assists the FMO and:

- (1) Directs the quality assurance program?
- (2) Manages the lab?
- (3) Directs the entire training program?
- (4) Supervises inspections?
- (5) Maintains inventory control?

Reference

MIL-HDBK-844A (AS), PAR 2.1.2.2

131 01 008 RESPONSIBILITIES - FMO and AFMO

Are the FMO and AFMO:

- (1) Assigned full-time primary positions?
- (2) Graded positions, if civilians?
- (3) Carrying delegated authority commensurate with responsibility?
- (4) Reporting directly to the Supply, Logistics, or Operations Officer?
- (5) Possessing broad fuel background and experience?

Reference

NAVAIR 00-80T-109, PAR 8.1

131 01 009 RESPONSIBILITIES - FUEL DELIVERY SUPERVISOR

Generally, do specific duties include:

- (1) Delivery of POL products alongside aircraft?
- (2) Operation of the hydrant system (hot refueling)?
- (3) Operation of the aircraft defuelers?

DETAILED INSPECTION CHECKLIST

(4) Delivery of ground products?

(5) Pickup of waste oil?

Reference

MIL-HDBK-844A(AS), PAR 4.1.3.3

131 01 010 RESPONSIBILITIES - STORAGE/TRANSFER SUPERVISOR

Generally, do specific duties include:

(1) Receipt, storage and transfer of product?

(2) Operation of the storage/transfer systems?

(3) Operation of the vehicle service station?

(4) Grass cutting in hazardous areas?

(5) Maintenance of storage/transfer facilities/equipment?

Reference

MIL-HDBK-844A (AS), PAR 4.1.3.4

131 01 011 RESPONSIBILITIES - QUALITY SURVEILLANCE SUPERVISOR

Generally, do specific duties include:

(1) Sampling product at point of receipt and aircraft tanks?

(2) Surveillance of fuel-handling operations?

(3) Surveillance of filtration, water removal, monitoring of pressure gauges/logs?

(4) Operation of the laboratory?

(5) Inspection and surveillance of facilities and equipment including contractor-owned equipment?

Reference

MIL-HDBK-844A (AS), PAR 4.1.3.5

131 01 012 RESPONSIBILITIES - INVENTORY SUPERVISOR

Generally, do specific duties include:

(1) Estimating POL requirements and scheduling deliveries?

(2) Maintaining daily inventory records?

(3) Processing receipt/issue documents?

(4) Monitoring contract fuel deliveries?

(5) Adequately reporting gains/losses?

Reference

MIL-HDBK-844A (AS), PAR 4.1.3.6

131 01 013 RESPONSIBILITIES - TRAINING SUPERVISOR

Generally, do specific duties include:

(1) Preparation of training guide?

(2) Conducting classroom and OJT training?

DETAILED INSPECTION CHECKLIST

- (3) Certifying qualifications and issue certificates?
- (4) Maintaining training and qualification records?
- (5) Reviewing and supplementing contractors' training program?

Reference

MIL-HDBK-844A (AS), PAR 4.1.3.7

131 01 014 RESPONSIBILITIES - AIRCRAFT CUSTODIANS

Has Aircraft Custodians trained:

- (1) Nozzle operators?
- (2) Aircraft directors?
- (3) Fire watches?

Reference

NAVAIR 00-80T-109, PAR 8.1.1

131 01 015 RESPONSIBILITIES - AIR OPERATIONS OFFICER

Has the Air Operations Officer provided input to:

- (1) Establishing servicing priorities?
- (2) Operating procedures on aprons and ramps?
- (3) Aviation safety procedures?
- (4) Any particular/unique fuel servicing requirement?

Reference

NAVAIR 00-80T-109; PAR 8.1.1

131 01 016 FUEL OFFICE - SET-UP

A. Does the fuels office have sufficient space to perform the necessary planning, administrative, and management functions associated with the mission?

B. Does the fuels office have sufficient space to perform the necessary planning, administrative, and management functions associated with the mission?

Reference

NAVAIR 00-80T-109, PAR 11.11.1

131 01 017 FUEL CREW READY/TRAINING ROOM - SET-UP

A. Does the crew ready/training room have the minimum:

- (1) Dispatch desk?
- (2) Climate control?
- (3) Lockers and dressing room?
- (4) Toilet and shower facilities?
- (5) Phone and other communication equipment?

DETAILED INSPECTION CHECKLIST

Reference

NAVAIR 00-80T-109, PAR 11.11.2

131 02 ADMINISTRATION and INVENTORY MANAGEMENT

131 02 001 ADMINISTRATION – GENERAL

A. At GOGO activities, has a Responsible Officer (RO) been appointed/assigned in writing for care and safekeeping of DLA-owned POL product? (1) (3)

NOTE: At GOCO activities, Responsible Officer is designated in contract or a Property Administrator is assigned to monitor contractor performance.

B. Is the respective document (Letter of Appointment) on file? (1), (2), (3)

C. Is an inventory turnover document retained with appointment letter and signed by the outgoing and incoming RO? (3)

D. Has the RO/TM/PA completed -their required training? (1), (3)

E. Does the RO: (1), (3)

(1) Ensure accountable records/reports are maintained per filing conventions? (2)

(2) Ensure that all transaction (receipts, issues, inventories, etc.) are properly documented and reported? (6)

(3) Investigate/research operating/storage discrepancies and submit required reports?(1),(6)

(4) Maintain a tracking mechanism to ensure required personnel review policy (3)

(5) Assign a backup to the primary accountant (1)

(6) Maintain an active folder of approved waivers? (2)

(7) Established local procedures to ensure non-encoded VIL keys and VIL key encoders are safeguarded to minimize potential fraud against the government? (5)

(8) Enforce DLA ENERGY and local management control procedures to ensure disciplined accountability and control of encoded VIL keys issued to organizations? (5)

(9) Maintain a copy of the VIL key request letter with the signed vehicle/equipment listing in the document control files? (5)

(10) Has the primary and or secondary accountant completed FMD training? (1) (3)

(11) Does the accountant/secondary accountant have assigned user ID to access all required applications? (1) (3)

Reference

(1) DOD 4140.25M; (2) DESC-P-3; (3) DESC-P-7; (4) DESC I-23; (5) DESC-P-5 (6) DESC-P

DETAILED INSPECTION CHECKLIST

131 02 002 INVENTORY - FREQUENCIES

- A. Are all active tanks gauged daily before and after receipts, issues, or transfers? (1)
 - B. Are daily physical inventories of DLA-owned product accomplished in accordance with the requirements of DESC-P-1? (1)
 - C. Is a monthly physical inventory of DLA-owned product accomplished as of 0800 hrs, local time, on the first calendar day of each month? (1)
 - D. Is a quarterly accuracy verification program established for activities with ATG installed/operational? (2)
 - E. Are all quantities corrected to 60 degrees Fahrenheit? (2)
- Reference
(1) DLA Energy-P-7 AND (2) DESC-P-1.

131 02 003 INVENTORY – REPORTING

- A. Are inventories reported on DD Form 1348-8 (P-41 Document Identification Code)? (1)
 - B. Are inventories reported on DD Form 2921 for capitalized inventories? (1)
 - C. Is there a pipeline inventory (certified) and is it included in the overall inventory? (1)
 - D. Are rolling stock inventories calculated to 60 degrees and a part of the overall inventory? (1)
 - E. Is a daily acceptable gain and loss limit per product establish to initiate investigations as they occur when the daily reconciliation of Book to Physical identifies a gain or loss that exceeds the established daily limit. (2)
- Reference
(1) DESC-P-1; AND (2) DLA Energy-P-7

131 02 004 INVENTORY - ADJUSTMENTS/RECONCILIATION'S

- A. Are monthly fuel gain/losses charted and analyzed for trends? (4)
- B. Are the BLSA account ledgers reconciled with the FES account ledger monthly? (4)

DETAILED INSPECTION CHECKLIST

- C. Are gains and losses that exceed tolerance factors investigated to determine the cause and documented/ reported on DD Form 1348-8? (1)
- D. Are the DD Form 1348-8s/ End of Month Reports signed by the Responsible Officer/Terminal Manager and forwarded to DLA ENERGY-N Division? (1) (4)
- E. When gains/losses exceed established tolerances, are inventory records adjusted by the actual quantity? (2)

Tolerance Factors are: intrans storage

130, MG1, MUR etc.,	50%	.50%
JP-4 (Only)50%	.30%
JP-5, JP-8, DF2, F-76, etc.50%	.25%

Is storage variances computed as follows: (example) (3)

EOM book inventory	1,000 gals
EOM physical inventory	1,003 gals
Difference (gain)	+3 gals
Beginning inventory	800 gals
Receipts (all additions)	400 gals
Sum (beginning inventory + receipts).	1,200 gals
Variance %: $3 / 1,200 = 0.0025 \times 100 = 0.25\%$	gain

Are in-transit variances computed as follows: (example) (3)

Quantity received by gauge	79,800 gals
Difference (loss)	- 200 gals
Variance %: $200 / 80,000 = 0.002 \times 100 = 0.25\%$	loss

Reference

(1) DOD 4140.25, PAR 10-D-1C; (2) DOD 4140.25, PAR 10-D-2B; (3) DOD 4140.25; PAR 10-D-2C AND; (4) DESC-P-1;

131 02 005 GAUGING - GENERAL

- A. Do personnel wait a minimum of 30 minutes after receipt of fuel before gauging tank? (1)
- B. Does the gauging process include the measurement of fuel, water and temperature? (2)(4)
- C. Are fuel and water readings recorded in feet, inches and 1/8-inch increments? (3)
- D. Are gaugings performed until two identical readings are obtained? (2) (3)

DETAILED INSPECTION CHECKLIST

E. Are ATG/AFHE systems calibrated and are the calibration dates current? (2) (3)

Reference

(1) MIL-STD-3004C, PAR 5.9.4; (2) DESC-P-1; (3) DESC-P-2; (4) DLA Energy –p-7

131 02 006 STRAPPING TABLES/CHARTS

A. Does each storage tank have an individual “certified” individual strapping table/ charts that shows measurements in feet, inches and 1/16 inch increments?

B. Are strapping chart data points correctly entered into the ATG and verified as accurate against the strapping chart conversion?

C. Are a minimum of 21 data points entered into the ATG System?

Reference

DESC-P- 2

131 02 007 DATA CONTROL AND SYSTEMS ADMIN

A. Has the Responsible Officer identified and appointed DFSP personnel to serve as the Base Level Support Application (BLSA) Administrator? (2)

B. Does the Base Level Support Application Administrator creates and maintains a current BLSA System Access Control Roster? (2)

C. Does the BLSA Administrator maintain and use a separate user account when performing routine daily functions? (2)

D. Has the BLSA Administrator validated user privileges within BLSA annually and documents the validation? (2)

E. Are all BSM-E FAS databases properly backed-up daily, weekly, monthly, and annually? Are monthly and Fiscal Year backup CDs/tapes stored in suitable container/vault at a geographical separate location away from the computer terminal? (2)

F. Are data and document control practices in place IAW DESC-P-3? (1)

Reference

(1) DESC-P-3; AND (2) DESC-I-23

NOTE: Accounting guidance reflected in 4140.25-M is currently updated by DLA ENERGY interim policies and procedures please refer to the DLA ENERGY website for appropriate documentation.

DETAILED INSPECTION CHECKLIST

131 03 FUEL OPERATIONS

131 03 001 FUEL OPERATIONS - GENERAL

- A. Does the activity have a comprehensive Fuel Facility Operations Manual that conforms to 33 CFR 154 and State regulations? (1)
- B. Is the manual divided into the following sections: (1)
 - (1) General information?
 - (2) Operational procedures and guidelines?
 - (3) Quality surveillance programs?
 - (4) Preventive and corrective maintenance?
 - (5) Emergency procedures?
 - (6) Security, safety, fire prevention, and environmental protection procedures?
 - (7) Records and documentation procedures?
 - (8) Training and certification programs?
 - (9) Appendices?
- C. Is the manual reviewed annually, when major changes are issued by higher authorities, or when major changes in fuel facility operations occur? (1)

Reference

- (1) 33 CFR, PAR 154.300

131 03 002 OPERATIONS – GENERAL

- A. Do refueling personnel discontinue any fuel operation that does not appear to be progressing in a normal fashion (e.g.; appears to be taking much longer than would normally be expected, or pressures are too high, etc.) or when safety violations are evidence, and notify the FO/FMO? (1)
- B. Are working areas illuminated for night operations per Table 3, API RP-450? (2)
- C. Does electrical equipment installed on/near fuel handling/ storage facilities meet minimum requirements of NFPA 70, The National Electric Code (JP-4 risk factor); NFPA 77, Recommended Practice on Static Electricity; and NFPA 78, Lightning Protection Code? (3)

Reference

- (1) NAVAIR 00-80T-109, PAR 12.1; (2) NAVAIR 00-80T-109, PAR 11.1.5; AND (3) NAVAIR 00-80T-109, PAR 11.1.6

DETAILED INSPECTION CHECKLIST

131 03 003 OPERATIONS - MILITARY GAS STATION

- A. Is the Fueling Island surrounded by concrete with a 1% grade away from the Island? (1)
- B. Are fuel dispensers calibrated? (2)
- C. Dispensing hoses:
- D. Are hoses a maximum of 18'? (3)
- E. Do hoses have an emergency breakaway coupling? (4)
- F. Is there an in-line filtration system to remove sediment 10mg/L or less? (5)
- G. For liquid is supplied under pressure is there an emergency shut-off valve with fusible link? (5)
- H. Is there an emergency shut-off switch? (6)
- I. Are fire extinguishers available and in the vicinity? Current PM completed? (7)

Reference

(1) UFC 3-460-01 para 7.3.5; (2) UFC 3-460-03 para 10.3.15; (3) NFPA 30A para 6.5.1; (4) NFPA 30A para 6.5.2; (5) UFC 3-460-01 para 7.6.1.1; (6) NFPA 30A para 6.7; (7) NFPA 30A para 9.2.5.2

131 03 004 EQUIPMENT (EQMT) FILTER/SEPARATOR

- A. Are filter/separators (MIL-PRF-52308 or EI1581, 5th edition) used for all aviation and ground fuels issues?
- B. Has the vessel been designed/constructed IAW Section 8, ASME Boiler and Pressure Vessel Code in force at time of construction?
- C. Do F/S meet the performance requirements of MIL-F-8901/API/IP 1581?
- D. Do F/S elements meet MIL-F-52308 (NSN 4330-00-983-0998 or API 1581 requirements?
- E. Are F/S located:
 - (1) In receiving lines (upstream) of all operational storage tanks where fuel can be pumped directly to aircraft?
 - (2) In supply lines (downstream) from storage tanks to truck fill stands?

DETAILED INSPECTION CHECKLIST

- (3) On any discharge (downstream) side of transfer pumps that supply aircraft or refuelers?
- (4) On any equipment that directly fuels aircraft?
- (5) The main receiving line (upstream) of the bulk storage tanks?

F. Is all metal downstream of a F/S where fuel is delivered directly into aircraft, non-ferric or stainless steel?

NOTE: Coated ferric materials are not acceptable.

G. Does the F/S vessel have:

- (1) Manual water drain valve?
- (2) Automatic air eliminator valve?
- (3) Differential pressure gauge with 1-psi graduation and mounted free of vibration?
- (4) Pressure relief valve?
- (5) Diaphragm-operated control valve (slug valve) that shuts off the flow of fuel if the water in the sump rises above the set level?
- (6) Head lifting device (stationary installed only)?

Reference

NAVAIR 00-80T-109, PAR 11.2.1

131 03 005 EQMT - QUALITY MONITORS

Are all fuel monitors (formerly go, no-go monitors) taken out of service/removed from all aviation fueling equipment?

Reference

COMNAVAIRSYSCOM MSG R 041444Z OCT 06

131 03 006 EQMT - RELAXATION CHAMBERS

A. Is a relaxation chamber installed after fuel monitor or F/S?

B. Does the system allow the fuel to relax for at least 30 seconds?

C. Are the vessel designed/constructed IAW Section 8, ASME Boiler and Pressure Vessel Code?

Reference

NAVAIR 00-80T-109, PAR 11.2.2

131 03 007 EQMT - METERS

A. Are temperature compensated meters installed at point of custody transfer recommended)?

B. Are all meters calibrated? (2)

Reference

NAVAIR 00-80T-109, PAR 11.2.3 AND (2) UFC 3-460-03, PAR 10.3.16

DETAILED INSPECTION CHECKLIST

131 03 008 EQMT - PRESSURE GAUGES

A. Are pressure gauges easy to read, accurate to 1 psi, and graduated in 1-psi units? (1)

B. Are all gauges calibrated? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 11.2.4; (2) (2) UFC 3-460-03, PAR 10.3.16

131 03 009 EQMT - SAMPLING CONNECTIONS

A. Are sampling and pressure testing connections installed at:

(1) Receiving points?

(2) Tank outlets?

(3) Inlet and outlet of filter/separator and fuel monitor?

(4) Refueling nozzle?

(5) Each side of block valve?

B. Are all sampling connections of the flush-type, dry-break, quick disconnect with dust caps?

Reference:

NAVAIR 00-80T-109, PAR 11.2.5

131 03 010 EQMT - HOSES, COUPLINGS and PRESSURE REGULATORS

A. Are hoses inspected and pressure tested annually and test date marked on hose? (3)

B. Do all hoses meet the requirements of API 1529/NFPA 407; i.e. semi-hardwall, non-collapsible and a diameter compatible with delivery rate? (1)

C. Is the delivery hose on refuelers a minimum of 50 feet in length? (1)

D. Shore-based hoses shall contain no electrical bond or bonding wire through the center of the hose or in the carcass. (1)

E. Cam-Lock hose couplings shall not be used down-stream of the filter separator? (Camlock hose fittings should not be used on mobile refueling equipment)? (1)

F. Does each single point refueling (SPR) nozzle assembly have a hose end pressure regulator set for a maximum of 55 psi? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 11.2.6; (2) NAVAIR 00-80T-109, PAR 11.2.9; AND (3) NAVAIR 00-80T-109; 13.3.3.4.2

DETAILED INSPECTION CHECKLIST

131 03 011 EQMT - EMERGENCY DRY-BREAK and QUICK DISCONNECT COUPLINGS (MCAS Only)

- A. Is an emergency dry breakaway coupling installed on the pantograph refueling system? (Optional on refuelers where hose connects to hose reel/piping) (1)
- C. Is a dry-break quick disconnect coupling installed at the nozzle end of the hose and is it equipped with a 60- or 100-mesh screen which is readily accessible without the use of tools? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 11.2.7; AND (2) NAVAIR 00-80T-109; PAR 11.2.8

131 03 012 EQMT - REFUELING NOZZLES

- A. Does the SPR nozzle meet the requirements of MIL-N-5877?
- B. Is the SPR nozzle equipped with a quick disconnect for taking samples and pressure checks?
- C. Does the O/W nozzle meet the requirements of MIL-N-87963?
- D. Does the O/W nozzle have a 60-mesh or finer strainer?
- E. Does the O/W nozzle have a permanently attached flexible bonding wire with plug-type connector (clamp type connector optional if it conforms to MIL-C-83213)?

- F. Are dust covers in place when not in use?

Reference

NAVAIR 00-80T-109, PAR 11.2.10

131 04 BULK STORAGE (Also see QUALITY SURVEILLANCE)

131 04 001 BULK STORAGE – GENERAL

- A. Is the Bulk Storage Area Secured? (1)
- B. Do the fuel tank farm and transfer points contain adequate firefighting, fire alarm, and emergency eyewash/shower equipment? (2)
- C. Are bulk fuel storage tanks drained of water after each product receipt, a minimum of weekly thereafter, and prior to each issue? (3)

Reference

(1) See Part 15, Security for details; (2) NAVAIR 00-80T-109, PAR 11.3.1 AND (3) MIL-STD- 3004C, PAR 5.9.2

DETAILED INSPECTION CHECKLIST

131 04 002 STORAGE - AREA and DIKES

- A. Are all above-ground tanks surrounded by enclosures that hold the capacity of the tank plus one foot freeboard? (1) (4)
 - B. Except when physically draining dikes, are drains closed and locked? (1)
 - C. Does the drain discharge pipe lead into an oil/water separator? (3)
 - D. Is a record kept of each time tank fields are drained into a body of navigable waters without passing through a treatment system? (3)
 - E. Are weeds and brush growth cut and removed from dikes and tank areas? (2)(4)
 - F. Is vegetation outside the immediate working areas trimmed so not to exceed 4 inches in height? (4)
 - G. Are roadways/walkways maintained level, smooth, structurally sound and free from defects and potholes and cracks promptly repaired? (5)
- Reference
(1) UFC 3-460-01, PAR 8.14.2.1; (2) UFC 3-460-3, PAR 7.5.1 (3) UFC 3-460-3, PAR 10.3.1; AND (4) NAVFAC MO-230, PAR 5.12.4.1

131 04 003 TANKS - INSPECTION

NOTE: Petroleum storage tanks should be cleaned as often as necessary to maintain required product quality as determined by routine sampling and testing procedures.

Reference

MO-230; PAR 5.3.3.2.

- A. Is the exterior of all tanks (aviation and ground) visually inspected monthly for: (1) (4)

(See attached sample checklist from API Standard 653)

- (1) Leaks?
- (2) Shell distortions?
- (3) Signs of settlement?
- (4) Corrosion?
- (5) Paint coatings?
- (6) Insulation systems?
- (7) Appurtenances?
- (8) Platforms, ladders, stairways for ... (4)
- (9) Corrosion?
- (10) Inadequate support?
- (11) Missing handrails?

DETAILED INSPECTION CHECKLIST

(12) Missing bolts, rivets, etc.?

B. Are all tanks (aviation and ground) visually inspected by a qualified inspector* at least every 5 years or at the quarter corrosion-rate life of the shell, whichever is less?

C. Are bulk and operating tanks (aviation) inspected by physical entry at the following frequencies (years) and cleaned as necessary? (3)

(NOTE: This schedule differs from the schedule specified in MO-230; Table 5.3.1)

	Bulk*	Operating
Uncoated and with inlet f/s	6 /5**	5
Uncoated and w/o inlet f/s	4	3
Coated and with inlet f/s	8 /5**	8 /5**
Coated and w/o inlet f/s	6 /5**	5

* Bulk tanks with direct receipt from barge or tanker shall be inspected like operating tanks frequencies.

** 5 years recommended checking the mechanical integrity of the interior and components

NOTE: Newly constructed tanks should be inspected after one year of initial filling to check the condition of the interior coating, an item still under warranty.

Reference

(1) API Standard 653, PAR 4.3.1./2/3; (2) API Standard 653, PAR 4.3.2; (3) STANAG 3609,C-2 AND (4) NAVFAC MO-230; PAR 5.3.4.4

131 04 004 TANKS – CONFIGURATION

A. Are all operational/ready-issue tanks 100 percent coated with polyurethane or epoxy? (1)

B. Are bulk tanks coated on the bottom and 1 meter (38.6“) up from the bottom? (1)

C. Are concrete tanks 100 percent lined on the floor and side walls? (1)

D. Can fuel be circulated and filtered? (1)

E. Are outlets at the lowest point to eliminate water bottoms? (1)

F. Are tank bottoms sloped downward from the shell at a uniform slope of 1 inch vertically to 20 inches horizontally to a bottom sump at the center? (3)

DETAILED INSPECTION CHECKLIST

- G. Are aboveground tanks equipped with a frost-proof water draw-off valve at the shell with a 1-inch connection from the bottom of the sump? (3)
- H. Are tanks equipped with a water-stripping system? (2)
- I. Older tanks with flat or crowned up bottoms should be inspected during cleaning for signs of water pockets and actions taken to ensure that all bottom water can be removed. (3)
- J. Are roofs in good repair and allow no rainwater to enter? (1)
- K. Are tanks configured to allow no more than 3-feet-per-second fill rate? (1)
- L. Are all tanks fitted with automatic gauging devices (float or similar) that are readily accessible and visible at eye level?

Note: Float-type devices shall not be used for accounting (1)

Reference

(1) NAVAIR 00-80T-109, PAR 11.9; (2) NAVFAC MO-230, PAR 5.3.8.3; AND (3) NAVFAC MO-230, PAR 1.4.3.1

131 04 005 TANKS – ALARMS (HIGH AND LOW)

- A. Are all tanks fitted with high and low level controls to prevent overfilling and pump cavitation? (1) (2)
- B. Are high level alarms set at approximately 95 percent of the safe fill height and do they actuate an audible alarm? (1) (2)
- C. Are high level alarms set at approximately 98 percent of the safe fill height and do they continue the audible alarm plus actuate a visual alarm? (1) (2)
- D. Is the high level shut-off valve mechanically actuated to stop the flow of fuel between the 95 and 98 percent fill height? (1) (2)
- E. Do low level alarms have a distinctly different sound and do they stop the product transfer pumps? (1) (2)

Reference

(1) NAVAIR 00-80T-109, PAR 11. 9 (1); AND (2) NAVFAC MO-230, PAR 5.3.8.6

131 04 006 TANK VENTS and FLAME ARRESTORS

- A. Are open vents inspected for: (1)

DETAILED INSPECTION CHECKLIST

- (1) Openings are clear of obstructions (bird- insect nests; trash, etc.)?
- (2) Existence of flame snuffers are open and free to operate?

B. Do pressure vacuum vents operate freely? (1)

C. Are flame arrestor screens free of debris? (2)

(Flame arrestors required on tanks that store product with flash point of less than 100 degree F)

Reference

(1) NAVFAC MO-230, PAR 5.3.8.1; AND (2) NAVFAC MO-230, PAR 5.3.8.2

131 04 007 PAINTING AND MARKINGS

A. Are markings applied at all: (1) (7)

(1) Receiving connections?

(2) Dispensing outlets?

(3) Tank fills and discharge lines?

(4) Locations where line connections are made to manifolds? and

(5) At any other location necessary to assure ready product identification in the required size and configuration?

NOTE: For single-product, isolated system, only the line coming into the a manifold must be marked)

B. Are colors other than yellow for "warning" and "black" and "white" for identification used within the fuel system? (2)

C. Are identifying titles and bands clearly legible at all times and are they clearly visible from the operating position? (3)(4)

D. At locations that may serve NATO countries, are NATO symbols applied/used? (5)(8)

E. Where space is limited (pits, etc.) are the bands and titles stenciled on the pit covers or adjacent walls? (6)

Reference

(1) MIL-STD-161G, PAR 4.1.1; (2) MIL-STD-161G, PAR 4.3.3; (3) MIL-STD-161G, PAR 4.4; (4) MIL-STD-161G, PAR 5.1.1.1; (5) MIL-STD-161G, PAR 4.5; (6) MIL-STD-161G, PAR 5.1.8; (7) MIL-STD-161G, PAR 6.3; AND (8) MIL-STD-3004C, PAR 5.9.3.7

131 04 008 RECEIPTS - GENERAL

A. Does fuel received pass through a F/S or other filtration device? (Recommended) (1)

DETAILED INSPECTION CHECKLIST

- B. To the extent practical, are cargoes discharged into a single, low-innage shore tank and quality checked prior to transferring into identical bulk product storage tanks? (4)
- C. Are empty tanks filled at a rate greater than 3 feet per second until the roof is floating on a floating roof tank or a minimum of 3 feet above the fill line? (2)
- D. After a minimum 30 minutes settling time, is the tank gauged for water and water removed? (2) (3) (5)
- E. Are sampling devices bonded to the tank before the sampling hatch is opened? (5)
- F. Are aviation fuel receiving tanks allowed settling for a minimum of 8 hours (12 hours for diesel fuels) when fuel is not received thru filters? (4)
- G. Is newly received aviation fuel allowed to settle for a minimum of 2 hours prior to dispensing? (3)
- H. Do personnel wait a minimum of 30 minutes after receipt of fuel before gauging? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 11.8; (2) MIL-STD-3004 C, PAR5.1.1.7; (3) NAVFAC MO-230, 1.4.3.1; AND (4) MIL-STD-3004 C, PAR 5.9.3.8;

131 04 009 RECEIPTS - TANKER/BARGE

- A. Does the FMO post written orders stating the following: (1)(2)
 - (1) Pier preparation and inspection?
 - (2) Pipelines to be used?
 - (3) Number and size hoses to be connected?
 - (4) Receiving tanks
 - (5) Pump houses and pumps to be operated?
 - (6) Number and location of samples?
 - (7) Tests required?
 - (8) Communications to be used?
 - (9) Personnel assignments?
 - (10) Preparation of the "Declaration of Inspection"
- B. Does the activity instruction cover the following: (1)(2)
 - (1) Filling of lines before the barge is docked?
 - (2) Notification to start unloading?
 - (3) Unloading speed?

DETAILED INSPECTION CHECKLIST

- (4) Line patrol and gauge check?
- (5) Changing of tanks?
- (6) Change in pump operation?
- (7) Barge stripping procedure and stripping speed?
- (8) Final inspection of barge tanks?
- (9) Draining of pier lines?
- (10) Personnel manning level?
- (11) Personnel training requirements?
- (12) Special clothing requirements?
- (13) Fuel sampling and testing requirements?

C. If the product is suspected of being contaminated, is a sample taken prior to off load and tested at a laboratory? (2)

D. Are any delays in discharging reported to DLA ENERGY? (2)

E. Are bulk tanks drained of water after each receipt and weekly thereafter? (3)

Reference

(1) NAVAIR 00-80T-109, PAR 12.13.1; (2) MIL-STD-3004 C, PAR 5.1.3.1; AND (3) MIL STD-3004C, PAR 5.9.2

131 04 010 RECEIPTS/ISSUES - PIPELINE

A. Does the FMO post written orders stating the following: (1)(2)

- (1) Pipeline preparation and inspection?
- (2) Pipelines to be used?
- (3) Number and size hoses to be connected?
- (4) Receiving tanks
- (5) Pump houses and pumps to be operated?
- (6) Number and location of samples?
- (7) Tests required?
- (8) Communications to be used?
- (9) Personnel assignments?
- (10) Preparation of the "Declaration of Inspection"

B. Does the activity instruction cover the following: (1)(2)

- (1) Notification to start unloading?
- (2) Unloading speed?
- (3) Line patrol and gauge check?
- (4) Changing of tanks?
- (5) Change in pump operation?
- (6) Personnel manning level?
- (7) Personnel training requirements?
- (8) Special clothing requirements?
- (9) Fuel sampling and testing requirements?

DETAILED INSPECTION CHECKLIST

- C. Before a pipeline operation is started, is it determined that the line fill is the same as the product scheduled to be transferred? (2)
 - D. Are receiving tank(s) gauged, temperature taken, and net quantities determined before and after receipt? (2)
 - E. Are bulk tanks drained of water after each receipt and weekly thereafter? (3)
- Reference
(1) NAVAIR 00-80T-109, PAR 12.13.2; (2) MIL-STD-3004 C, PAR 5.2;
AND (3) MIL-STD-3004B, PAR 5.9.2

131 04 011 RECEIPTS/ISSUES - TANK TRUCKS/CARS

- A. Unloading: (Other than PC&S) Are the following procedures followed?:
(1) (2)
 - (1) Ensure that seals are intact?
 - (2) Verify seal numbers to shipping document?
 - (3) Verify specification/grade to shipping document?
 - (4) Fuel level coincides with marking on the tank and quantity on the shipping document?
 - (5) Tank bottom sample taken from each compartment and water drawn off?
 - (6) Fuel sample visually tested (clear and bright and no contaminants)?
 - (7) Product unloaded into segregated storage tank(s)?
 - (8) Vehicle's tank interior checked after delivery to ensure that all products have been discharged?
 - (9) After completion of receipt, are storage tank sampled and quality control tests performed?
- B. Unloading: For PC&S are the following procedures followed?: (3)
 - (1) Paperwork, seals, quantity, quality checked?
 - (2) Samples taken and checked (Type C)?
 - (3) All tanks completely empty?

NOTE: The U.S. Government reserves the right to perform quality inspection at all times and places if warranted. (3)

- C. Loading: Are the following procedures followed: (2)
 - (1) Inspected for mechanical condition and suitability to transport product?
 - (2) Dome covers opened and bottom outlet valves full opened? (drip pan in place)?
 - (3) Interiors clean and free of rust, etc.?

DETAILED INSPECTION CHECKLIST

- (4) Domes and openings secured and sealed?
- (5) Placarded as to cargo carried?
- (6) Fuel checked (Type C) and sample retained until product has been received and tested by the using facility?

D. Are receiving tank(s) gauged, temperature taken, and net quantities determined before and after receipt? (2)

E. Is the API gravity taken and is it within 0.5 degrees of the gravity reported on the shipping document? (2)

F. Before a tank truck is rejected, are the shipping point and quality representative notified? (2)

G. Are bulk tanks drained of water after each receipt and weekly thereafter? (4)

Reference

(1) NAVAIR 00-80T-109, PAR 12.13.3; (2) MIL-STD-3004 C, PAR 5.3; (3) MIL-STD-3004C; PAR 5.4; AND (4) MIL-STD-3004 C; PAR 5.9

131 04 012 RECEIPTS - BULK ADDITIVES

A. Prior to unloading:

- (1) Is the paperwork examined to ensure proper additive is being delivered?
- (2) Is sampling done with safety equipment and knowledge of the Material Safety Data Sheet?
- (3) Is separate sampling equipment use to sample additives?
- (4) Are truck seals examined to ensure they are intact?
- (5) Are truck pump and hoses clean and capped?
- (6) Is density tested in accordance with product specification?

B. Do responsible base personnel assure injection equipment is in working order and that the rate of injection of the additive into the product is correct?

C. After product has been injected, is the product sampled and tested and outside temperature considered in the process?

Reference

MIL-STD-3004 C, PAR 5.8

131 04 013 LONG-TERM STORAGE

A. Is product in long-term storage (product in a storage tank with no new product added) tested every six months?

DETAILED INSPECTION CHECKLIST

- B. If deterioration of product in long-term storage is determined, in the product expeditiously consumed or rotated?

Reference

MIL-STD-3004 C; PAR 5.9.1 and Table VIII

131 04 014 UNDERGROUND STORAGE TANKS (UST)

- A. Are all UST identified and reported to the appropriate state agencies?
- B. On newly installed UST tanks, are state agencies notified 30 days prior to the installation?
- C. Are leak detection and monitoring systems installed?
- D. Is the leak detection system checked to make sure it is working properly

Reference

NAVFAC MO-230, PAR 3.3.6.5/6

131 04 015 CHANGE OF PRODUCT - STORAGE TANKS

Is NAVSUP ENERGY contacted for instructions on the change of product in storage tanks? (1)

Reference

NAVAIR 00-80T-109; PAR 12.15

131 05 OPERATIONS (FUEL TRUCKS, FILL STANDS, PARKING and GPVs)

131 05 001 AIRCRAFT REFUELER TRUCK FILL STANDS

- A. Are working areas illuminated (1-footcandle (10 LUX)) for night operations per Table 4, API RP-450? (1)
- B. Does electrical equipment installed on/near fuel handling/ storage facilities meet minimum requirements of NFPA 70, The National Electric Code (JP-4 risk factor); NFPA 77, Recommended Practice on Static Electricity; and NFPA 78, Lightning Protection Code? (2)
- Reference
(1) NAVAIR 00-80T-109, PAR 11.1.5; AND (2) NAVAIR 00-80T-109, PAR 11.1.6

131 05 002 TRUCKS - SPECIFICATIONS

Do all military and contractor refuelers have? (1)

- (1) One compartment tank construction?
(2) Low point drain at allows tank to be drained of all fuel?
(3) Aluminum or stainless steel tanks?

DETAILED INSPECTION CHECKLIST

- (4) Tank top opening(s) that are semi-permanently secured and used only for inventory or inspection/repairs?
- (5) Manhole covers with fusible plug(s) each equipped with a fine screen?
- (6) Bottom loading for a fill rate up to 600 GPM?
- (7) Electronic control fill system (Scully type or equivalent)?
- (8) Filter/separator (MIL-F-8901) equipped with manual water drain at bottom of sump
- (9) Automatic air eliminator valve?
- (10) Differential pressure gauge with 1-psi graduations and mounted so that it is free of vibrations and can be easily read?
- (11) Pressure relief valve?
- (12) Diaphragm-operated control valve (slug valve)?
- (13) Fuel quality monitors (go/no-go) (MIL-M-81380)?
- (14) Relaxation chamber at allows at least 30 seconds of relaxation?
- (15) Pressure and differential pressure gauges?
- (16) Positive displacement meter (temp compensating desired)?
- (17) Approved aircraft refueling hoses (API 1529; semi-hardwall, non-collapsible) a minimum of 50 feet in length?
- (18) No cam lock hose coupling?
- (19) Dry-break, quick-disconnect coupling at nozzle end of hose with 60- or 100-mesh screen?
- (20) Hose end pressure regulator set at 55 psi max?
- (21) Approved aircraft refueling nozzles ...?
- (22) SPR (MIL-N-5877)?
- (23) Over wing (MIL-N-87963) with 60 mesh or finer screen and bonding wire with clamp/connector)?
- (24) Bonding cable?
- (25) Aircraft refuelers at least two fire extinguishers (one in front on the driver's side and one at rear on other (right) side)?
- (26) Remote, hand-held, dead man control?
- (27) Non-FOD type tires and no recaps in front when operating off base?
- (28) Suitable spark arrestor?
- (29) Sampling and pressure testing connections of flush-type, dry-break, quick disconnects with dust caps (Gammon fittings) at inlet/outlet sides of filter/separator and monitors?
- (30) Refueling nozzle?
- (31) No grease fittings on swing joints?

Reference

- (1) NAVAIR 00-80T-109, PAR 11.3.2;

131 05 003 TRUCKS - MARKINGS (See Enclosure/Excerpt)

A. Are aviation and ground fuel servicing vehicles marked?

- (1) "FLAMMABLE" in 6-inch red reflective letters on an 8-inch white background to the front, rear, and each side? (1) (2)

DETAILED INSPECTION CHECKLIST

(2) NO SMOKING WITHIN 50 FEET” (same size and color) on each side and rear? (1)(2)

B. With product identification (same size and color) on each side and rear? (1)

(1) Jet Fuel JP-5; F-44; Placard 1863

(2) Jet Fuel JP-8; F-34; Placard 1863

(3) MOGAS Leaded; Placard 1203

(4) MOGAS Unleaded; Placard 1203

(5) DIESEL FUEL; Placard 1993

(6) AVLUBE; Placard 1270

(7) LUBE OIL; Placard 1270

C. NATO symbol (same size and color) centered below each product designation? (1)

D. Department of Transportation (DoT) placards? (1)

E. “EMERGENCY SHUTOFF” with “PUSH”, “PULL” or as appropriate, in 2-inch red reflective letters on white background at emergency switches? (1)

F. Front and rear bumpers may be painted black and 4-inch stripes of yellow reflective sheeting 4 inches apart at an incline of 45 degrees from left and right of the center vertical starting pattern? (1)

G. Defuelers will be marked “JET FUEL” only (2)

Reference

(1) NAVFAC P-300, PAR 2.15.5 and Figures J-6 and J-7; AND (2) NAVAIR 00-80T-109, PAR 11.1.4

131 05 004 TRUCKS – PAINTING

Are refuelers:

(1) Painted yellow (paint code 13538)?

(2) Repainted when inadequate protection is afforded against rust or corrosion? (No repainting for change of color or gloss characteristics) (1)

(3) Spot painted in lieu of completely repainting? (If spot painting exceeds 20 percent of the unit surface, the entire unit shall be repainted) (2)

(4) Bare surfaces spot painted immediately? (1)

Reference

(1) NAVFAC P-300; PAR 2.15.2; AND (2) NAVAIR 00-80T-109; PAR 1.1.4

DETAILED INSPECTION CHECKLIST

131 05 005 TRUCKS -- PARKING AREA (Aircraft Refuelers ONLY; no guidelines on Ground Product Vehicles exit)

Does the activity have adequate truck parking areas that are / have / allow:

- (1) Accessible by good roads?
- (2) Parking area(s) and access roads paved and maintained in good condition?
- (3) Parking areas free from chuck holes and ruts?
- (4) Parking area contained by curbing, dikes, retention ponds or drainage to oil/water separator?
- (5) Containment sized to hold the largest vessel/truck?
- (6) Trucks parked in designated parking areas?
- (7) Trucks positioned so that they are free to exit without backing or abnormal maneuvering to avoid structures (buildings, pipelines, fill stands, etc.)?
- (8) 25 feet center-to-center separation?
- (9) 100 feet separation from any inhabited building?
- (10) Separate entry/exit gates designed to facilitate one-way traffic patterns within the Parking area?
- (11) Free and direct egress from the parking area at all times (no backing, no jack- knifing, no additional maneuvering)
- (12) Security fencing to preclude unauthorized/ unintended entry if fuel compound is not already secured?
- (13) Vehicle/personnel gates secured? (Remote control gates with driver operated control devices are recommended)
- (14) Security lighting capable of illuminating the entire refueler parking area?
- (15) Spill containment that will prevent the run-off of fuel in the event of a tank rupture or major spill? (Slopes no more than 2 percent (recommended))

Reference

NAVAIR 00-80T-109, PAR 11.7.

131 05 006 TRUCKS -- INSPECTIONS/SERVICE (All Vehicles/Equipment) (Also in MAINTENANCE)

- A. Are all vehicles/equipment inspected and serviced DAILY by the operator before, during, and after operation? (1)(2)
- B. Does the operator use a check list (daily, weekly, monthly)? (1)(2)
- C. Are the completed checklists on file for: (2)
 - (1) Daily – 1 month
 - (2) Weekly, monthly - 6 months
 - (3) Maintenance reports – 2 years

DETAILED INSPECTION CHECKLIST

Reference

(1) NAVFAC P-300, PAR 4-1.10 /11; AND (2) NAVAIR 00-80T-109; PAR 13.3

131 05 007 TRUCKS - REFUELERS/DEFUELERS - SPECIAL

A. Are the refuelers used primarily for cold refueling? (Occasional hot refuelings is authorized) (1)

B. Do refuelers/defuelers have the following minimum features: (2)

- (1) Marked with 'JET FUEL/JP" in place of the regular markings?
- (2) Have a dedicated defuel connection to piping system that passes the fuel through the pump, f/s, monitor, and relaxation chamber before it enters the tank?
- (3) A separate hose and nozzle assembly for the two different operations
- (4) Maximum defuel rate of 100 GPM?
- (5) High level alarm installed? (Highly recommended)?
- (6) Manholes remain closed during operation?

NOTE: Hose evacuation systems shall not be used to defuel aircraft

Reference

(1) NAVAIR 00-80T-109, PAR 11.3.2; AND (2) NAVAIR 00-80T-109, PAR 11.5.

131 05 008 TRUCKS - DEFUELERS ONLY

Do defuelers (used only for defuels and fuel is not directly reissued to aircraft) have the following minimum features:

- (1) Marked "DEFUELS ONLY"?
- (2) A centrifugal pump with a maximum defuel rate of 100 GPM?
- (3) A cutoff or alarm system (jet sensor, float high level, fiber optic, or thermostat probe) for overfill protection?
- (4) Hoses that conform to API 1529/NFPA 407 (semi-hardwall and non-collapsible)?
- (5) Is the fuel in the defueler sampled and tested to determine disposition?
- (6) Hose evacuation systems shall not be used to defuel aircraft

Reference

NAVAIR 00-80T-109, PAR 11.5.2

131 05 009 FILL STANDS - AIRCRAFT REFUELERS

Overhead truck fill stands (top loading) is not authorized for any product.

Does the fillstand have the following minimum features:

DETAILED INSPECTION CHECKLIST

- (1) Separate loading system for each grade of product?
- (2) SPR nozzle with dry break quick disconnect and strainer?
- (3) Loading hose (API 1529) approximately 10 feet in long or mechanical loading arm with non-lubricating swivels?
- (4) Loading hose thermal pressure relief valve?
- (5) Diaphragm operated two-stage control valve (low flow / high-flow) with adjustable time delay to prevent the high flow from opening until 1 minute after start of fuel flow?
- (6) Meter (Temperature compensated meters are recommended)?
- (7) Filter/Separator?
- (8) Quality monitor?
- (9) Relaxation tank or equivalent piping?
- (10) Shutoff valves for maintenance?
- (11) Sample outlet?
- (12) A high level cutoff system?
- (13) Low intensity instrument lighting?
- (14) Spill containment system that will prevent the run-off of fuel in the event of a tank rupture or major spill? (Ramps shall be no more than 2-percent grades (2.4 inches in 10 feet)
- (15) Overhead lighting in the immediate truck fueling area?
- (16) All piping after the filter separator to the fillstand shall be non-ferrous or stainless steel?

Reference

NAVAIR 00-80T-109, PAR 11.6

131 05 010 FILLSTAND - TRUCK FILLING (Aircraft Refuelers)

- A. Is truck filling a one-person operation when equipped with high-level alarms/shut-off and dead man control; or a two-person operation without these devices? (1)
- B. Is top loading prohibited. (1)
- C. Are personnel permitted on top of truck during filling? (2)
 - (1) Positioned in place?
 - (2) Lights turned off?
 - (3) Gear shift in neutral/park?
 - (4) Parking brake set?
 - (5) Engine off?
 - (6) All non-essential switches off?
- D. Is the product verified? (2)
- E. Is bonding/high-level control cable connected? (2)
- F. Is the meter set at zero? (2)

DETAILED INSPECTION CHECKLIST

G. Is a completely drained truck minimally filled (500 -1,000 gallons) using another truck set at low flow rate? (2)

H. Is the truck inspected for leaks? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 12.4.1.1; AND (2) NAVAIR 00-80T-109, PAR 12.4.1.2

131 05 011 FILL STAND REQUIREMENTS (Ground Product Vehicle's)

A. Bottom loading is the only acceptable method; OCONUS locations where only contracted top loading is available permission must be obtained from the Service Headquarters. (1)

B. Spill containment area with impermeable retention and controlled drainage system leading to a concrete remote spill containment system? (maximum slope within 2%; except rollover curbs, which shall not exceed 8% horizontal length and shall not be less than 15 feet) (2)

C. Separate loading system for each grade of product? (3)

D. Does the fillstand have the following minimum equipment (4)

(1) Meter (Temperature compensated if point of custody transfer)?

(2) Strainer with pressure or differential gages?

(3) Sampling connections?

(4) Solenoid operated diaphragm control valve, open/close speed control, pressure regulating, check and solenoid shut-off features interlocked with high level shut-off ground verification and deadman control system

(5) Electronic high-level; shut-off, ground verification, and deadman control system; interlocks with pumps or solenoid

(6) Emergency fuel shut-off switch?

(7) Nozzle with drybreak coupling?

(8) Loading hose (El Std 1529) approximately 10 feet in length or pantograph loading arm with non-lubricating swivels?

(9) Manual isolation valves for equipment servicing?

(10) Thermal relief valve?

(11) Grounding/bonding reel?

Reference

(1) UFC 3-460-01 PG 44 3.4.2.1 SUB-PAR C; (2) UFC 3-460-01 PG 44/5 3.4.2.1 SUB-PAR D; (3) UFC 3-460-01 PG 46 3.4.2.1 SUB-PAR J; (4) UFC 3-460-01 PG 46, 47 & 48 3.4.2.2 SUB-PARA A - R

131 06 OPERATION - HOT PITS AND HYDRATES

131 06 001 AIRCRAFT DIRECT FUELING SYSTEM (HOT PIT)

DETAILED INSPECTION CHECKLIST

- A. Has the installation of the hot pit been authorized by NAVAIRSYSCOM?
- B. Has the construction of the system been based on:
 - (1) Rapid turnaround requirements for carrier aircraft?
 - (2) The volume of large, land-based patrol aircraft requiring average refuelings of over 2,500 gallons?
 - (3) The number of transport aircraft with limited ground time?
- C. Are the systems as shown in Figures 1, 2, and 3?
Reference
NAVAIR 00-80T-109, PAR 11.3.

131 06 002 HOT PIT FEATURES/REQUIREMENTS

Does the hot pit have the following features (minimum):

- (1) Filter/separator?
- (2) Relaxation chamber or equivalent piping?
- (3) Diaphragm-operated primary control valve?
- (4) Remote, hand held, dead man control (pantograph and hose system)?
- (5) Emergency pump shut-off switch?
- (6) Meter on each station outlet?
- (7) Re - circulation/flushing capability of the nozzle?
- (8) Emergency dry-breakaway coupling?
- (9) Bonding/grounding cables and points tested annually? (Grounding not required if continuity is less than 10,000 ohms)
- (10) Non-lubricating swivels?
- (11) Dry-break, quick-disconnect coupling with 60- to 100-mesh strainers?
- (12) SPR with 55-psi max pressure regulator?
- (13) Fire extinguishers (one 150-LB HALON or TAU per fueling point)?
- (14) Emergency eyewash/shower in immediate area?
- (15) Fire alarm?
- (16) An educator (hose evacuation) system shall not be incorporated or used.

Reference
NAVAIR 00-80T-109, PAR 11.3.1

131 06 003 PERSONNEL AUTHORIZED TO REFUEL TRANSIENT AIRCRAFT

Are fuels personnel authorized to refuel transient aircraft identified by local instructions?

Reference
NAVAIR 00-80T-109; PAR 8-1.1

DETAILED INSPECTION CHECKLIST

131 07 RAIL HEADS

131 07 001 RAIL HEADS - GENERAL

- A. Are Tank Cars kept in the same grade of service? (2)
- B. Is the facility equipped for bottom loading? (1)
Reference
(1) NAVFAC MO-230, PAR 2.5.1; AND (2) MIL-STD-3004C, PAR 5.3

131 07 002 RAIL – RECEIPTS

- A. Is the receipt tank ready and has the tank been gauged, temperature taken and net quantity determined?
- B. Is the paperwork checked prior to unloading to determined correct product?
- C. Are all seals checked and do they correspond with the seals stated on the DD Form 250? (If seals are missing or broken the product shall not be unloaded)
- D. Is the product tested (Type C) and any water drawn off prior to unloading?
- E. At terminals, is the API gravity/density at 60 Degrees taken and compared with the density at 60 degrees on the DD Form 250? And is the difference within +/- 2kg/m³ (0.5 degrees API)?
- F. After discharge, is the tank car examined to determine if all product has been discharged?
- G. Is the receipt quantity determined and is it within the allowable tolerance IAW 4140.
Reference
MIL-STD-3004 C, PAR 5.3.2

131 08 PIERS AND WHARVES

131 08 001 PIERS AND WHARVES - GENERAL

- A. Are all pipelines and equipment clearly marked, per MIL-STD-161F, to identify the grade of being carried?
- B. Are pipelines used for one grade of product only?
- C. Are non-lubricating plug valves (double block and bleed valves) installed along the

DETAILED INSPECTION CHECKLIST

waterfront for environmental protection?

- D. When possible, piping should be located above the pier deck)
- E. Each line should have a cast carbon steel double block and bleed valve near the point where it leaves the shore
- F. Does each line have a connection for draining? Are lines that will not be used for 90+ days drained and blanket off?
- G. Are hose connections/loading arm areas equipped with spill containment as follows:
 - (1) 3 bbls if it serves one or more hoses or arm 6 inches or less in diameter
 - (2) 4 bbls if it serves one or more hoses or arms between 6 and 12 inch diameters
 - (3) 6 bbls if it serves one or more hoses or arms larger than 12 inch diameters
- H. Are the following systems/equipment available
 - (1) Fire protection system?
 - (2) Communication system?
 - (3) Pollution abatement equipment?
 - (4) Personnel and equipment shelter?
 - (5) Security fencing?
 - (6) Bonding system?
 - (7) Lighting equipment?

Reference

NAVFAC MO-230, PAR 2.1.3

131 08 002 RECEIPTS/ISSUES - TANKER/BARGE (Also in STORAGE Section)

- A. Does the FMO post written orders stating the following: (1)(2)(3)
 - (1) Pier preparation and inspection?
 - (2) Pipelines to be used?
 - (3) Receiving tanks
 - (4) Pump houses and pumps to be operated?
 - (5) Number and location of samples?
 - (6) Tests required?
 - (7) Communications to be used?
 - (8) Personnel assignments?
- B. Does the activity instruction cover the following: (1)(2)(3)
 - (1) Filling of lines before the barge is docked?

DETAILED INSPECTION CHECKLIST

- (2) Notification to start unloading?
- (3) Unloading speed?
- (4) Line patrol and gauge check?
- (5) Changing of tanks?
- (6) Change in pump operation?
- (7) Barge stripping procedure and stripping speed?
- (8) Final inspection of barge tanks?
- (9) Draining of pier lines?
- (10) Personnel manning level?
- (11) Personnel training requirements?
- (12) Special clothing requirements?
- (13) Fuel sampling and testing requirements?

C. Does the accompanying shipping document (DD Form 250-1) contain statements on the quantity and quality of the product and is the form prepared by/under the supervision of a Government QSR? (2)

D. Do vessels certify that cargo tanks are suitable for loading the intended cargo by including the following statement in the Notice of Readiness: "All compartments, lines, and pumps to be used are suitable for loading and delivering the intended cargo." (2)

E. When loading tankers/oilers, is a sample drawn from the first tank, after about a 30 minutes wait, and tested for quality? (2)

NOTE: Initial loading shall not exceed three feet/one meter per second through loading lines into the cargo tanks until the discharge outlet has been covered by at least three feet of product. (2)

F. Are ullages, water sounding, temperatures and samples taken only after a minimum of 30 minute wait? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 12.13.1; (2) MIL-STD-3004 C, PAR 5.1.; AND (3) MIL-STD-3004 C; PAR 5.1.3.

131 09 OPERATION (AIRCRAFT FUEL SERVICINGS)

131 09 001 AIRCRAFT SERVICING - GENERAL

A. Are personnel identified by local instructions that are authorized to refuel transient aircraft? (1)

B. Do refueling personnel discontinue any fuel operation that does not appear to be progressing in a normal fashion (e.g.; appears to be taking much longer than would normally be expected, or pressures are too high, etc.) or when a safety violation is in evidence, and notify the FO/FMO? (2)

DETAILED INSPECTION CHECKLIST

- C. Does the FMO approve abnormal fuel operations? (FMO has final decision making authority) (2)
- D. Is simultaneous fueling and loading/downloading of weapons prohibited? (2)
- E. Is fueling equipment operated by qualified fuel personnel and not sub-custody to other fuel management organizations? (3)
- F. Are night vision goggles used during refueling operations and are they used IAW local procedures? (4)
- G. Are all refueling operations recorded in a log? (5)
- H. Are all fueling vehicles constantly attended whenever the engine is in operation? (6)

Reference

- (1) NAVAIR 00-80T-108, PAR 8.1.1; (2) NAVAIR 00-80T-109, PAR 12.1;
(3) NAVAIR 00-80T-109, PAR 12.2; (4) NAVAIR 00-80T-109, PAR 12.2.3;
(5) NAVAIR 00-80T-109, PAR 12.3; AND (6) NAVAIR 00-80T-109, PAR 12.4.3

131 09 002 FLIGHT LINE OPERATION AND DRIVING

- A. Whenever possible, do trucks proceed down a line of parked aircraft with the driving path perpendicular to the aircraft fuselage? (1)
- B. Is driving between aircraft parked in line avoided? (1)
- C. Do trucks approach closer than 10 feet of an AC? (1)
- D. Are trucks backed in proximity to aircraft? (1)
- E. Are trucks left/parked pointing toward any part of an AC? (1)
- F. Are truck parked on the same side as the AC SPR? (1)
- G. Is the hose passed underneath the AC to reach the SPR? (1)
- H. Are the O/W and PR systems operated simultaneously? (1)
- I. Is the truck choked? (2)
- J. Is the parking brake set? (2)
- K. Is the gearshift in neutral? (2)
- L. Are headlights and unnecessary switches off? (2)

DETAILED INSPECTION CHECKLIST

M. Is the driver's door and a cab window partially open? (2)

N. During servicing, does the truck operator have a direct line of sight to the nozzle operator? (1)

Reference

(1) NAVAIR 00-80T-109, PAR 12.4.2.1; AND (2) NAVAIR 00-80T-109

131 09 003 TRUCK REFUELING - COLD

A. For SP JP-5/8 or Jet A/A-1 refuel - are a minimum of two trained and certified personnel assigned - a driver/ operator and a nozzle operator? (1)

NOTE: In an emergency, the driver/operator's first duty is to release the deadman control and then operate the fire extinguisher while the nozzle operator disconnects the nozzle from the AC. Once the nozzle has been disconnected, the nozzle operator operates the fire extinguisher. (1)

B. (For O/W refuel) - Are a minimum of three trained and certified personnel assigned - a driver/operator, a nozzle operator and a fire extinguisher operator? (4)

C. Is the system flushed and samples taken and analyzed prior to the first operation of the day? (2) (4)

D. Is the fuel sample clear and bright w/no visible sediment? (2) (4)

E. Has the plane captain checked for hot breaks prior to positioning of refueler? (3) (4)

F. Is the aircraft choked and are the engines off? (3)

G. Are all the electronic and electrical switches on the AC off and no non-essential equipment in operation? (3)

H. Is fire-fighting equipment in the immediate vicinity, manned, and upwind from the operation? (3) (4)

I. Is a bonding cable attached between the fueling equipment and AC? (3) (4)

J. Is the O/W nozzle bonded to the AC before the fill cap is removed? (4)

K. Are the nozzle face and AC receptacle inspected for dust, any damage, or excessive wear? (3) (4)

DETAILED INSPECTION CHECKLIST

- L. Does the fueling operator start operation only after receiving signal from nozzle operator/plane captain? (3) (4)
- M. Is the deadman control blocked open or otherwise compromised? (3) (4)
- N. Do all electrical systems, support equipment, etc.; remain in the off/static position during fuel servicing? (3) (4)
- O. Does the nozzle operator assist the driver/operator in removing and replacing the hose on the refueler? (1)

Reference

(1) NAVAIR 00-80T-109, PAR 12.4.2.3.1; (2) NAVAIR 00-80T-109, PAR 12.4.2.2; (3) NAVAIR 00-80T-109, PAR 12.4.2.3.2; AND (4) NAVAIR 00-80T-109, PAR 12.4.2.4.2

131 09 004 PITS/HYDRANT REFUELING – COLD

- A. (For SP refuel) – Are a minimum of two trained and certified personnel assigned: a nozzle operator and a fuel system operator who also is the fire extinguisher operator? (1)
- B. (For O/W refuels) – Are a minimum of three trained and certified personnel assigned: a nozzle operator, a fuel system operator, and a fire extinguisher operator? (3)
- C. Is the system flushed and samples taken and analyzed prior to the first operation of the day? (2) (4)
- D. Is the fuel sample clear and bright w/no visible sediment? (2) (4)
- E. Has the plane captain checked for hot breaks? (2) (4)
- F. Is the aircraft choked and are the engines off? (2) (4)
- G. Are all the electronic and electrical switches on the AC off and no non-essential equipment in operation? (2) (4)
- H. Is fire-fighting equipment in the immediate vicinity and manned? (2) (4)
- I. Is a bonding cable attached between the fueling equipment and AC? (2) (4)
- J. Is the O/W nozzle bonded to the AC before the fill cap is removed? (4)
- K. Are the nozzle face and AC receptacle inspected for dust, any damage, or excessive wear? (2) (4)

DETAILED INSPECTION CHECKLIST

- L. Does the fueling operator start operation only after receiving signal from nozzle operator/plane captain? (2) (4)
- M. Is the deadman control not blocked open or otherwise compromised? (2) (4)
- N. Do all electrical systems, support equipment, etc.; remain in the off position during fuel servicing? (4)

Reference

(1) NAVAIR 00-80T-109, PAR 12.3.1.1; (2) NAVAIR 00-80T-109, PAR 12.3.1.2; (3) NAVAIR 00-80T-109, PAR 12.3.2.1; AND (4) NAVAIR 00-80T-109, PAR 12.3.2.2

131 09 005 REFUELING - WITH AUXILIARY POWER UNIT (APU) RUNNING

In addition to the normal cold refueling procedures, are the following special precautions observed:

- (1) Is one person outside the aircraft within 10 feet of the APU exhaust with a fire extinguisher of the size specified by the Fire Chief?
- (2) Did the fuel operator verify that the AC is grounded?
- (3) Is one person stationed at the Gas Turbine Compressor (GTC) in the cockpit?
- (4) Is an intercom established between cockpit and refueling personnel to ensure immediate shutdown?
- (5) Do personnel in the vicinity wear sound-attenuating ear protectors?

Reference

NAVAIR 00-80T-109, PAR 12.9

131 09 006 CONCURRENT REFUELING

- A. Did the CO grant authorization to the FMO for concurrent refueling, cargo loading, and cargo off-loading (including passengers) in support of logistical airlift operations?

NOTE: Loading/off-loading of Class A and B explosives during refueling is not authorized.

- B. Did the CO establish local regulations/procedures for concurrent operations?
- C. Did the CO clearly designate one qualified person (Quick Service Supervisor (QSS) in charge of each operation?
- D. Does the concurrent refueling operation commence only after the QSS has been identified and established in control and given the signal to start?

DETAILED INSPECTION CHECKLIST

- E. Does the QSS remain at the refueling site at all times?
- F. Is the QSS aware that he/she is responsible for, and has jurisdiction/authority over, all servicing operations including fueling trucks/equipment, fueling procedures, power units, loading/unloading equipment, and passenger management and communication?
- G. Do the local regulations include the following procedures/ precautions:
- (1) Are all vehicles that operate within a 50-foot radius equipped with spark arrestors and designated in advance?
 - (2) Are fire extinguishers located in the immediate vicinity?
 - (3) Is a crash truck standing by when passengers or patients remain onboard during concurrent refueling?
 - (4) Is an attendant present at the cabin door to enforce the no smoking rule when passengers/patients remain on board during concurrent refueling?
 - (5) Are exit ramps located in proper position to permit evacuation when passenger/patients remain on board during concurrent refueling?
 - (6) When passengers enplane or deplane during refueling operation, is attendant assigned to prohibit passengers from entering hazardous areas?
 - (7) Is a combination system between person in charge and fire truck in place in the event of an emergency?
 - (8) Is maintenance work or LOX servicing performed during the concurrent refueling? During refueling, is a clear path maintained around the aircraft at all times?

Reference

NAVAIR 00-80T-109, PAR 12.10

131 09 007 HOT REFUELING (TRUCK) - PREPARTION and SETUP

- A. Are hot refuelings performed only when operational requirements dictate? (1)
- B. Are a minimum of three/four trained and certified personnel performing the operation - a station operator, a nozzle operator, and a fire watch/extinguisher operator? (1) (2)

NOTE: If the deadman control operator does not have a direct line-of-sight of both the aircraft pilot and the nozzle operator, a fourth person (refueling coordinator) is mandatory.

- C. Is the servicing unit/system grounded through a connection that offers less than 10,000 ohms resistance? Trucks must be grounded and bonded to the AC. (2) (3)

DETAILED INSPECTION CHECKLIST

- D. Is the servicing unit/system located at least 50 feet from any part of the aircraft? (2) (3)
 - E. Does the deadman control cut off the flow of fuel within two seconds? (2)
 - F. Is the aircraft choked? (2) (3)
 - G. Does each servicing member wear ear protectors, goggles, cranials, long-sleeved shirts, and pants? (No shoes with metal devices) (2) (3)
 - H. Is one fire extinguisher available for each aircraft being refueled? (2) (3)
 - I. Does the system/unit have a dry-breakaway coupling? (2) (3)
- Reference
(1) NAVAIR 00-80T-109, PAR 12.5; (2) NAVAIR 00-80T-109, PAR 12.5.1 AND (3) NAVAIR 00-80T-109, PAR 12.5.2

131 09 008 HOT REFUELING - PROCEDURES

- A. Prior to entering the refueling area, is the system flushed and samples taken and analyzed prior to the first operation of the day? (1)
 - B. Is the fuel sample clear and bright w/no visible sediment? (1)
 - C. Prior to entering the refueling area; has the plane captain checked for hot breaks? (1)
 - D. Prior to entering the refueling area; has the area been policed for FOD and FOD removed? (1)
 - E. Prior to entering the refueling area; does the servicing crew wear ear protectors, goggles, cranials, long-sleeved shirts and pants? (No shoes with metal devices) (1)
 - F. Are crew changes ("hot seating") conducted in the fuel pit? (-2)
 - G. Did qualified squadron personnel verify that ordnance is safe? (1)
- NOTE: During increased DEFCON, hot refueling with explosive ordnance onboard may be authorized by operational commanders.
- H. Is the aircraft taxied into the refueling area with the SPR on the side of the fueling hose? (2)
 - I. Is the aircraft choked? (2)

DETAILED INSPECTION CHECKLIST

- J. Is the AV-8B's water injection system/tank serviced in the refueling area? (2)
- K. Is the pantograph extended to a sufficient distance for the emergency dry breakaway to work properly? (No interference with the movement of the aircraft)
- L. Does the hose or pantograph pass underneath the AC to reach the SPR? (2)
- M. Is the refueling operation discontinued immediately if any leaks are discovered? (2)
- O. Does the deadman control operator have a direct line-of-sight to the refueling nozzle operator? (2)
- P. Are the AC canopy and the helicopter side doors/windows on the side of the SPR closed during the refueling operation? (2)

NOTE: Rear cargo doors/windows and/or doors/windows on the opposite side of the SPR may remain open.

NOTE: At the pilot's discretion when high temperatures and humidity exist, the canopy on AV-8B aircraft may remain open during refueling.

- Q. Are all the electronic and electrical switches on the AC off and no non-essential equipment in operation? (2)
- R. Is fire-fighting equipment in the immediate vicinity, manned, and upwind from the operation? (2)
- S. Is a bonding cable attached between the fueling equipment and AC and is the AC or truck grounded? (2)
- T. Are the nozzle face and AC receptacle inspected for dust, any damage, or excessive wear? (2)
- U. Does the fueling operator start operation only after receiving signal from nozzle operator/plane captain? (2)
- V. Is the deadman control blocked open or otherwise compromised? (2)
- W. Do all electrical systems, support equipment, etc.; remain in a static position during fuel servicing? (2)
- X. Is a pre-check system performed; i.e. are all AC shutoff valves closed and does the flow of fuel stop within 1 minute (checked by observing the meter) (2)

DETAILED INSPECTION CHECKLIST

- Y. Does the plane captain monitor vents, pressure gauges and/or warning lights as necessary? (2)
- Z. Does the fuel operator check for leaks or any unusual occurrences?
- AA. Does the nozzle operator assist the driver/operator in removing and replacing the hose/pantograph? (2)
- BB. Is the area cleared of personnel and equipment? (2)
- CC. Is the paperwork completed? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 12.5.3.1; AND (2) NAVAIR 00-80T-109, PAR 12.5.3.3

131 09 009 MULTI-SOURCE REFUELING

Is multiple source refueling (multiple trucks, or truck and hydrant) conducted IAW Technical Order (TO) 00-25-172?

Reference

NAVAIR 00-80T-109, PAR 12.6

131 09 010 PIGGYBACK REFUELING

- A. Is the piggyback refueling (one truck refueling the aircraft and the other truck(s) refueling the connected truck) performed under the direct supervision of the FMO?
- B. Are detailed local instructions that delineate each individual's responsibilities and duties available?
- C. Do the refuelers have both high- and low-level alarms and shutoffs in place and operational?
- D. Are a minimum of five trained and certified personnel performing the servicing - a driver/operator per servicing system, one nozzle operator per nozzle, and a dedicated fire extinguisher operator?
- E. Are all the procedures specified for cold refuelings followed?
(Restated here for convenience)
- F. Does the nozzle operator assist the driver/operator in removing and replacing the hose on the refueler?

Reference

NAVAIR 00-80T-109, PAR 12.7

DETAILED INSPECTION CHECKLIST

131 09 011 TRANSFERRING FUEL FROM ONE AIRCRAFT TO ANOTHER

Are the following only authorized fueling operations are:

- (1) Refueling AC, fuel storage bladders, or ground vehicles from KC-130 AC
- (2) Refueling AC, fuel storage bladders, or ground vehicles from CH-53 AC
- (3) Transferring fuel between AC using plane-to-plane transfer carts

Reference

NAVAIR 00-80T-109, PAR 12.8

131 09 012 DEFUELING AIRCRAFT - PRE OPERATION

- A. Does the FMO personally decide the disposition of all defueled product (1)
- B. Is a defuel request for an aircraft that is leaking fuel considered an emergency and handled promptly? (1)
- C. Is the defuel requested by an authorized representative of the squadron's CO using an Aircraft Defueling Certificate similar to Figure 12-12? (1)
- D. Is the authorized representative's name on the list of officially designated persons and on file at the FMO? (1)
- E. Is the authorization list updated at least quarterly? (1)
- F. Are a minimum of three trained and certified personnel performing the operation - a nozzle operator, a fuel system operator and a fire watch? (1)
- G. Prior to initiating the defuel operation, is a fuel sample taken from the aircraft and visually analyzed? (Clear and bright with no visible sediment) (3) (Sq. personnel)
- H. Has the truck operator determined the status of the fuel (i.e. suspect or non-suspect)? (3)
- I. Has the person requesting the defuel confirmed that the fuel is, or is not suspect? (3)
- J. Has the truck operator determined from squadron personnel the estimated amount of the defuel? (3)
- K. Is the correct defueler used; i.e. defueler for suspected fuel and refueler/defueler for non-suspect fuel? (3)

DETAILED INSPECTION CHECKLIST

- L. Did the truck operator check the ullage of the truck to insure that there is adequate room to hold the defuel? (3)
- M. Is the aircraft spotted 50 feet from all structures and other aircraft? (1)
- N. Is at least one 20-B fire extinguisher in the immediate vicinity? (1)
- O. Is a check made for possible sources of ignition? (3)
- P. Does the defueling request chit correspond with the instruction from the dispatcher? (3)
- Q. Is a bonding cable attached between the defueler and the AC? (3)
- R. Is the defueling hose connected properly? (3)
- S. Are eductor/evacuation systems used to defuel AC? (1)
- T. Does the defueler maintain a flooded suction in the tank to minimize turbulence and ingestion of air (1,000 gallons recommended)? (1)
- U. Are all valves upstream of the pump closed to prevent the circulation of fuel and opened only to prime the pump? (1)
- V. If the defueling operation is halted, is it restarted only after a 1 (one) minute of wait to dissipate static? (1)
- W. Does the defueling operator start operation only after receiving signal from nozzle operator/plane captain? (3)
- X. During defueling, is maintenance performed that is not directly required for the defueling operation? (1)
- Y. During defueling, are defueler tank tops open? (1)
- Z. Does the defueling operator adjust the valves downstream of pump to optimize defuel rate? (3)
- AA. Is the maximum defuel rate 100 GPM? (3)
- BB. Is very close attention paid to defuel rate to prevent pump cavitation and/or loss of prime? (3)
- CC. After completion of defuel, is the area checked for FOD? (3)
- DD. Is all fuel removed from turbine-engine aircraft tested for flash point and fuel returned to storage tanks only after the flash point is tested

DETAILED INSPECTION CHECKLIST

and within tolerance? (1)

EE. Is the option exercised to return fuel containing leak detection dye to aircraft to the same squadron if the squadron's requesting official signs a statement that the fuel is non-suspect and safe for use?

FF. Does the FMO personally decide the disposition of all defueled product (contact NAVSUP ENERGY for advice)? (1)

GG. Is a special log for each defueling operation maintained that contains the minimum information: (1)

- (1) A complete list of all squadron personnel authorized to sign defuel request forms (updated quarterly)?
- (2) All abnormal happenings?
- (3) Aircraft buno?
- (4) Defueler number?
- (5) Grade of product?
- (6) Actual amount defueled?
- (7) Requested amount to be defueled?
- (8) Disposition of product?
- (9) Times defuel stated and completed?
- (10) Names of defueler and squadron personnel?

Reference

(1) NAVAIR 00-80T-109, PAR 12.11; (2) NAVAIR 00-80T-109, PAR 12.11.1; AND (3) NAVAIR 00-80T-109; PAR 12.11.2

131 09 013 DISPOSITION OF NONSUSPECT FUEL REMOVED FROM AIRCRAFT

A. Is non-suspect fuel disposed of as follows: (1)

- (1) Reissued to aircraft within the same squadron?
- (2) Reissued to aircraft with T-56 engines (P-3s and E-2s) that automatically compensate for fuel density changes?
- (3) Not issued to AC scheduled for immediate sea duty? (1)

B. Is suspected fuel disposed of as follows: (2)

- (1) Sampled and tested to determine the use limits as outlined in Appendix B, Aviation Fuel Deterioration Use Limits?
- (2) Downgraded to applicable the fuel and returned to the storage?

Reference

(1) NAVAIR 00-80T-109, PAR 12.11.3; AND (2) NAVAIR 00-80T-109, PAR 12.11.4

DETAILED INSPECTION CHECKLIST

131 10 QUALITY SURVEILLANCE (QS) (Also see FUEL STORAGE)

131 10 001 QUALITY SURVEILLANCE - GENERAL

- A. Are personnel responsible for handling fuels and lubricants thoroughly trained and fully qualified to perform their assigned responsibilities? (1)
 - B. Do all Service/Contracted activities have a formal fuel quality surveillance program, IAW MIL-STD-3004 C, for DLA-owned products from the point of receipt on the installation to the point of sale? (2)(7)
 - C. Is the aviation fuel delivered to the aircraft clear, bright, on specification and contains no freewater? (3)(6)
 - D. Does all fuel issued to aircraft go through 2 (min) filtration systems between storage and entering the aircraft? (4)
 - E. Are bulk fuel storage tanks drained of water after each product receipt, a minimum of weekly thereafter, and prior to each issue? (3)
 - F. Are all active tanks checked for water daily and weekly for static storage and water drained ASAP? (5)
 - G. If not all water can be removed, is the water layer checked monthly for hydrogen sulfide? (5)
 - H. Is dormant turbine fuel tested at a minimum of every 6 months? And are records available/maintained? (7)
 - I. Are all petroleum products tested IAW Table IX, MIL-STD-3004 C? (7)
- Reference
(1) MIL-STD-3004 C, PAR 4.1; (2) NAVAIR 00-80T-109, PAR 9.2; (3) NAVAIR 00-80T-109, PAR 9.5; (4) NAVAIR 00-80T-109, PAR 11.1.1; (5) MIL-STD-3004 C, PAR 5.9; (6) MIL-STD-3004 C, PAR 5.11; AND (7) MIL-STD-3004 C, PAR 4.2

131 10 002 CONTAMINATION - PREVENTION

- A. Are dust-tight caps or covers installed on all openings and connections including refueling nozzles? (1)
- B. Is all water drained daily from refuelers, tanks, etc.? (1)
- C. Prior to the first issue, is fuel circulated in all fueling equipment that has not been used during the past 24 hrs? (1)
- D. Is all fueling equipment properly marked? (1)

DETAILED INSPECTION CHECKLIST

- E. Are unusual operating conditions reported and investigated? (1)
- F. Are all tanks, filter/separators, and equipment provided with manual drains drained until a clear, bright, water-free sample is obtained? (2)
- G. Is a log to record filter/separator pressure readings maintained? (2)
- H. Is common piping systems used for incompatible products? Is unit depending on valves only to separate products?
- I. Are tanks, valves, pipelines, pumps, etc., clearly marked/identified and are system flow diagrams available to all operators? (3)
- J. Water drained to prevent microbiological growth? (4)
- K. Are fuel tanks, from the using vehicle/equipment back to the bulk storage tank, free of water bottoms? (5)

Reference

(1) NAVAIR 00-80T-109, PAR 9.8; (2) NAVFAC MO-230, PAR 1.4.3.1; (3) NAVFAC MO-230, PAR 1.4.3.3; (4) MIL-STD-3004 C; PAR 5.9; AND (5) MIL-STD-3004 C; PAR 5.12.2.4

131 10 003 FUEL SAMPLES - GENERAL

- A. Are persons assigned to take samples trained, experienced, competent, and conscientious? (1)(5)
- B. Are samples of aviation fuel submitted specifically for water and sediment determinations always collected in a clear glass bottles and protected from exposure to sunlight? (8)
- C. Are samples taken from the refueling nozzle of each aircraft fueling system, vehicle, truck fill stand, etc., during normal flow rates and tested using the CFD and FWD? (2)(3)

NOTE: Circulation of product and taking samples through tank top openings is not authorized. (4)

- D. Are sample containers/apparatus rinsed and flushed at least once with the fuel being sampled? (3)(8)
- E. Are samples protected from light and handled expeditiously; bottles filled to 1 inch from cap line? (3)
- F. Are all test results (visual and machine run) recorded on a log (Fig A-1) and used to monitor equipment performance? (2)

DETAILED INSPECTION CHECKLIST

- G. Are normal sample size submitted for analysis a minimum of 1 gallon, special samples 5 gallons and jet fuel full spec analysis 2 gallons? (5)
- H. Unless otherwise instructed, are fuel samples retained for 45 days? (6)
- I. Are retained samples of truck/car loading held until product has been received and tested by the using facility? (7)
- J. Are all sampling apparatus cleaned immediately after use and stored so it will remain clean until next use? (8)

Reference

(1) NAVAIR 00-80T-109, PAR 9.3; (2) NAVAIR 00-80T-109, PAR 9.2; (3) NAVAIR 00-80T-109, PAR 9.3.1; (4) NAVAIR 00-80T-109, PAR 9.8; (5) MIL-STD-3004C, PAR 4.2.1; (6) MIL-STD-3004 C, PAR 4.2.1.8.3; (7) MIL-STD-3004 C, PAR 5.3.1.3.8; AND (8) MIL-STD-3004C, PAR 4.2.1.5.1

131 10 004 FUEL SAMPLES - APPEARANCE (VISUAL)

- A. Is the Visual Quality Surveillance Test method 1010 (clean/clear and bright test) followed? (1)
- B. Is a round, transparent, glass bottle (1 qt -1 gal) used? (1)
- C. Is the fuel clear, bright, and colorless to straw-color? (2)
- D. Is the fuel in the bottle swirled to form a vortex and Particulates observed below the vortex investigated? (2)

Reference

(1) MIL-STD-3004C, METHOD 1010, PAGE 132; AND (2) NAVAIR 00-80T-109, PAR 9.5.1

131 10 005 FUEL SAMPLES - RECEIPT/ISSUES (GENERAL)

In addition to the routine samples, is a 1-gallon sample taken and stored in an approved flammable storage cabinet and retained for 60 days or until:

- (1) The product represented is consumed?
- (2) The product becomes non-representative of the sample held?

Reference

NAVAIR 00-80T-109, PAR 9.2.1

131 10 006 FUEL SAMPLES - RECEIPTS (TC/TT)

- A. Are seals intact and do the numbers correspond?

DETAILED INSPECTION CHECKLIST

- B. Immediately after fuel flow, is a sample taken visually checked for color and appearance (clear and bright), and tested for API gravity?
- C. Is product receipt halted if sample is NOT bright and clear and API gravity not within 0.3 degrees of gravity shown on shipping document?
- D. Is a second sample taken and tested for:
 - (1) Particulate (visual)?
 - (2) Free water (visual)?
 - (3) Flash point (JP-5 and JP-8 only)?
 - (4) FSII (turbine fuels only)?
- E. If both samples fail test requirements, is product receipt halted and an all-level sample obtained and tested?
- F. If resample contamination exceeds 2 mg/l solids or 5 PPM water, is additional sampling/testing performed downstream from the tank and filter separator to insure that contamination is reduced to acceptable level?
- G. If a repeat flash point failure occurs, are the FMO and QAR notified?
- H. Are all-level samples taken from each compartment?
- I. On multiple receipts from the same source (supplier and tank), is only the first delivery of the day for flash point and retention sample kept?

Reference

NAVAIR 00-80T-109; PAR 9.2.1.1

131 10 007 FUEL SAMPLES - RECEIPTS (PIPELINE)

- A. Is a line sample taken 1 minute after flow commences and visually checked for color and appearance (clear and bright), and tested for API gravity?
- B. Is the receiving tank segregated until further sampling and testing can be accomplished?
- C. Is an all-level sample taken (receiving tank) and tested for:
 - (1) Color? (clear and bright)
 - (2) Appearance?
 - (3) API gravity?
 - (4) FSII (turbine fuels only)?
 - (5) Flash point (JP-5 and JP-8 only)?
 - (6) Free water by FWD?
 - (7) Particulates by CFD or gravimetric?

DETAILED INSPECTION CHECKLIST

Reference

NAVAIR 00-80T-109, PAR 9.2.1.2

131 10 008 FUEL SAMPLES - RECEIPTS/ISSUES (TANKER/BARGE)

- A. Does the accompanying DD Form 250-1 contain statements on the quantity and quality of the product and is it prepared by/under the supervision of a Government QSR? (1)
- B. Before start of discharge, is an all-level sample taken from each tank and tested for: (2)

- (1) Color? (clear and bright)
- (2) Appearance?
- (3) API gravity?
- (4) FSII (turbine fuels only)?
- (5) Flash point (JP-5 and JP-8 only)?
- (6) Free water by FWD?
- (7) Particulates by CFD or gravimetric?

Reference

(1) MIL-STD-3004C, PAR 5.1.1.3 AND (2) NAVAIR 00-80T-109, PAR 9.2.1.3

131 10 009 SAMPLES -- BULK TANKS (Minimum frequency)

- A. Are active tanks gauged daily for water? (1)
- B. Are inactive tanks gauges weekly for water? (1)
- C. Are bulk tanks drained of water after each receipt and weekly thereafter? (3)
- D. Are bottom samples taken once a month and tested for water and sediment? (1) (2)
- E. Are static storage tanks sampled and tested every 6 months? (1) (2) (3)
- F. Is fuel close to its use limits issued or rotated? (1)

Reference

(1) NAVAIR 00-80T-109, PAR 9.2.2; (2) NAVFAC MO-230, PAR 5.3.5; AND (3) MIL-STD-3004 C, PAR 5.9

131 10 010 SAMPLES -- REFUELING EQUIPMENT

Are refuelers/equipment circulated (flushed) each day prior to the first refueling of the day?

DETAILED INSPECTION CHECKLIST

During circulation is the fuel sampled at the nozzle and checked/tested for:

- (1) Color? (clear and bright)
- (2) Appearance?
- (3) Free water (visual)?
- (4) Particulate (visual)?

Once a week is one sample taken from each refueling system and tested at the lab for:

- (1) Free water by FWD?
- (2) Particulate by CFD?
- (3) Is separate fuel used for each test?

Reference

NAVAIR 00-80T-109, PAR 9.2.3

131 10 011 SPOT CHECKS

A. If fuel is below 0.10 percent FSII upon receipt, are weekly spot checks made and fuel tested for FSII?

B. If fuel is above 0.10 percent FSII upon receipt, are monthly spot checks made and fuel tested for FSII?

Reference

NAVAIR 00-80T-109; PAR 9.2.3

131 10 012 CORRELATION SAMPLES

A. Does the activity take a series of routine, duplicate correlation samples in order to verify that in-house testing procedures and equipment are working properly? (1)

B. As an absolute minimum, once a month are, four 1-quart samples taken randomly from a direct refueling system and one set tested at the activity's lab for FSII and Particulates and the other one shipped to the area lab for testing? (1)

C. Are all test results recorded in a log similar to Attachment A-3 or A-4? (1)

D. Are Particulate differences greater than 0.8 mg/l investigated? (2)

E. Are FSII differences greater than 0.03% investigated? (2)

NOTE: If the activity routinely performs sediment tests by the gravimetric tests method, correlation samples to the regional lab are not required; however, the test results of at least four sediment and two FSII samples must still be reported monthly. (1)

Reference

DETAILED INSPECTION CHECKLIST

(1) NAVAIR 00-80T-109, PAR 9.2.4; AND (2) NAVAIR 00-80T-109, PAR 9.5.6

131 10 013 SAMPLES - SHIPMENT (ASTM D-2276)

A. Are all samples sent to the testing lab individually tagged (Figure A-4) with the following: (1)

- (1) Activity's name and address plus POC and phone?
- (2) Sample serial number?
- (3) Type fuel?
- (4) Date sample was taken?
- (5) Approximate time sample was taken?
- (6) Sample source?
- (7) Samplers name?
- (8) Sample classification (ROUTINE or SPECIAL) and tests required?

B. Are samples forwarded to the testing lab by the most expeditious means? (Special courier) (2)

C. Are samples for shipment via mil air correctly packed? (2)

D. Are new bottle caps used? (2)

E. Are samples for air shipment placed in UN1A1 cans (NSN 8110-01-371-8315; 1 gallon) with 4G fiberboard boxes (NSN 8110-01-436-7340)? (3)

Reference

(1) NAVAIR 00-80T-109, PAR 9.3.3; (2) NAVAIR 00-80T-109, PAR 9.3.5; AND (3) MIL-STD-3004C, PAR 4.2.1.5 131 10 014 CONTAMINANTS - SOLIDS (ASTM D-2276)

A. Is solid contamination that exceeds 1 mg/l at the dispensing point investigated and corrective actions initiated?

B. Is fuel delivery to aircraft stopped and corrective actions taken when solid contaminants exceed 2 mg/l?

Reference

NAVAIR 00-80T-109, PAR 9.5.2

131 10 014 CONTAMINANTS - FREE WATER

A. If fuel to the aircraft exceeds 10 PPM of free water, is a second sample taken tested?

B. If the second sample exceeds 10 PPM of free water, is fuel delivery to the aircraft stopped and corrective actions taken?

DETAILED INSPECTION CHECKLIST

- C. During receipts into bulk tanks, if particulates exceed 2 mg/l and/or free water 10 PPM, is extra testing and surveillance conducted?

References

NAVAIR 00-80T-109, PAR 9.5.3

131 10 015 FSII (ASTM D-5006)

- A. Are turbine fuels received from the wholesale system with a minimum of 0.10% FSII? (1)
- B. Is FSII stored in stainless steel or Teflon coated tanks (Recommended)? (1)
- C. Is FSII stock rotated frequently and tested every twelvemonth (Recommended)? (1)
- D. Is the minimum level of FSII 0.03% for USN and USMC aircraft (S-3, US-3, and SH-60)? (2)
- E. If the FSII level falls below 0.03% (S-3, US-3, and SH-60 ac only) is the CO or his/her representative notified? (2)
- F. Is the minimum level of FSII 0.07% for USAF, Army, and etc. aircraft? (2)
- G. If the FSII level falls below 0.07% (USAF, Army, etc. ac) is the pilot/crew notified? (2)

Reference

(1) MIL-STD-3004 C, PAR 5.10.2.4; AND (2) NAVAIR 00-80T-109, PAR 9.5.4

131 10 016 CHANGE OF PRODUCT - REFUELERS (see Checklist)

- A. Is the change of product performed IAW Figure 12-13, NATOPS; and TABLE XXIII in MIL-STD-3004C? (1)(2)
- B. Is fuel that is used to flush tanks and piping treated as contaminated fuel? (1)
- C. Are fuel samples visually inspected for sediment and water? (1)
- D. Does the specific gravity check to within 0.5 degrees? (1)

Reference

(1) NAVAIR 00-80T-109, PAR 12.14; AND (2) MIL-STD-3004C, TABLE XXIII

DETAILED INSPECTION CHECKLIST

131 10 017 CHANGE OF PRODUCT - STORAGE TANKS

Is the NAVSUP ENERGY contacted for instructions on the change of product in storage tanks?

Reference

NAVAIR 00-80T-109, PAR 12.15

131 10 018 RECLAMATION and DISPOSITION

A. Are the following factors considered prior to reclamation:

- (1) Contaminating agent?
- (2) Degree of contamination?
- (3) Probable end use of product?
- (4) Feasibility of removing contaminant(s)?
- (5) Location and quantity?
- (6) Availability of resources/cost effectiveness?
- (7) Are disposition instruction obtained from DLA ENERGY?

B. Does the disposition request to DLA ENERGY contain:

- (1) Specification and Grade?
- (2) Quantity?
- (3) Location?
- (4) Date of Receipt?
- (5) Name of manufacturer; contract-, batch-, qualification number; date of manufacture?
- (6) Type of storage container?
- (7) Accountable military department?
- (8) Need for replacement product?
- (9) Detailed lab test results?
- (10) Recommended alternate use, etc.?

Reference

MIL-STD-3004C, PAR 5.13.6/5.13.2

131 11 FUEL LABORATORY

131 11 001 LABORATORY - GENERAL

A. Does the laboratory have:

- (1) Workbench or counter(s) of sufficient size to accommodate and maintain all required test equipment in a ready-to-use position? (6)
- (2) Impermeable table top(s) and floor? (4) (6)
- (3) Climate control; e.g. air-conditioning/heating? (6)
- (4) Laboratory fumes hood and sinks? (1)(6)
- (5) Sink with running hot and cold water? (6)
- (6) Eyewash and drench showers? (1) (6)

DETAILED INSPECTION CHECKLIST

- (7) Lighting and electrical outlets fixtures IAW NFPA 70? (6)
 - (8) Arrangements for waste disposal? (1)
 - (9) An audible fire alarm, a fire blanket, and an approved fire extinguisher? (4) (6)
 - (10) Telephone for emergency use at or near lab? (1) (6)
 - (11) EXIT and NON-EXIT doors labeled? (3)
 - (12) Illuminated EXIT signs? (3)
 - (13) A Chemical Hygiene Plan? (2)
 - (14) Restricted access? (5)
 - (15) Exit doors swinging in the direction of exit travel? (5) (6)
 - (16) Doors equipped with panic hardware? (7)
 - (17) Storage cabinets for test equipment support items
 - (18) Are there ATEP/Emergency shut off switches to de-energize fans in case of emergency? (6)
- B. Does the petroleum product laboratory have an up-to-date technical library containing files of Government fuel and lubricant specifications and standard, quality surveillance handbooks and recommended calibration techniques to ensure the accuracy of physical and chemical analysis? (7) (8) (<http://assist.daps.dla.mil>)

Reference

(1) CFR 29, PAR 1910.1450 C; (2) CFR 29, PAR 1910.1450 E; (3) CFR 29, PAR 1910.37; (4) NFPA 45; (5) NFPA 101; (6) NAVAIR 00-80T-109, PAR 11.11.5; (7) MIL-STD-3004C, PAR 4.3; AND (8) NAVSUP P-588, PAR 4.3.3

131 11 002 ACTIVITY LABORATORY

Does each activity that refuels aircraft have a designated lab where the in-house inspections and tests can be performed in a clean, safe environment?

Reference

NAVAIR 00-80T-109, PAR 9.4.1

131 11 003 LAB - EQUIPMENT/APPARTUS

A. Does the Lab have:

- (1) Contaminated Fuel Detector (CFD)? (6640-01-013-5279 w/FDW new; 6630-00-706-2302 old)?
- (2) w/filter element fluid? (6630-00-877-3157)?
- (3) w/ written filter? (6630-00-849-5288)?
- (4) Free Water Detector (FWD)? (6640-00-999-2786)?
- (5) w/detector pads? (6640-00-999-2785)?
- (6) Free water Standard? (6640-00-999-2784) (changed and dated every 6 month?

NOTE: Each activity should possess at least two CFCs and two FWDs in operating condition. (2)

DETAILED INSPECTION CHECKLIST

- (1) B/2 Anti-Icing Kit or FSII Refractometer? (6630-01-165-7133)?
- (2) Hydrometers and 1,000 ml clear plastic/glass cylinder?
- (3) 29-41 degree range; JP-5/8 (6630-00-242-9258)?
- (4) 39-51 degree range; JP-5/8 (6630-00-245-8376)?
- (5) 49-61 degree range; JP-4/Mogas (-245-8377)?
- (6) 59-71 degree range; JP-4/Mogas (-245-8374)?

- B. Does the unit use a Pensky-Martin close cup flash point tester and propane cylinder (6630-00-530-0987, 6830-00-684-3041)? (2)
- C. Is all lab testing and measuring equipment calibrated for accuracy and tolerance IAW ISO 0012-1, Part 1? (3)
- D. Does the lab have an equipment replacement program for the purpose of identifying, planning, programming and budgeting for present and future equipment replacement? (4)

Reference

- (1) NAVAIR 00-80T-109, PAR 9.4.2; (2) NAVAIR 00-80T-109, PAR 11.11.5; AND (3) MIL STD-3004 C, PAR 4.2.2.7

131 11 004 LAB - VENTILATION

- A. Does the lab have an appropriate general ventilation system?
- B. Does the system provide a source of air for breathing and is the air continually replaced with fresh air? (4-12 room air changes per hour)

Reference

CFR 29, PAR 1910.1450 C-4

131 11 005 LAB - FUME HOOD

Is the hood:

- (1) Enclosed on 5 sides with a movable sash?(1)
- (2) Constructed and maintained to draw air from the lab?(1)
- (3) Allow chemical manipulations without insertion of any portion of the body other than hands and arms?(1)
- (4) Provide 2.5 linear feet of hood space per person?(1)
- (5) Equipped with a continuous monitoring device to allow convenient confirmation of performance?(1)
- (6) If controls are inside the hood, are additional controls located within 50 feet? (2)
- (7) Affixed with a sign (or a log) that identifies (2)
- (8) Inspection interval (annually)? (2)
- (9) Last inspection date? (2)
- (10) Average face velocity? (2)
- (11) Location of fan that serves hood? (2)
- (12) Inspector's name? (2)

DETAILED INSPECTION CHECKLIST

Reference

(1) CFR 29, PAR 1910.1450 and C4; AND (2) NFPA 45, PAR 6.9 AND 6.13

131 11 006 LAB - HOUSEKEEPING, MAINTENANCE and INSPECTIONS

Is/are:

- (1) Floors cleaned regularly?
- (2) Formal housekeeping and chemical hygiene inspections conducted semi-annually?
- (3) Eyewash fountains inspected no less than every 3 months?
- (4) Passageways clear of any debris and stored items?
- (5) Safety showers tested?(3)
- (6) Access to exits, emergency equipment, & utility controls blocked?(4)
- (7) Arrangements for waste disposal? (5)

Reference

(1) 29 CFR 1910.1450 APPENDIX A, D.4(A); (2) 29 CFR 1910.1450 APPENDIX A, D.4(B); (3) 29 CFR 1910.1450 APPENDIX A, D.4(C); (4) 29 CFR 1910.1450 APPENDIX A, D.4(D); (5) 29 CFR 1910.1450 APPENDIX A, C.1(E) & E.1(P)

131 11 007 Protective Apparel and Equipment

Does the laboratory have?

- (1) Easily accessible drench-type safety shower (1)
- (2) Eyewash fountain (2)
- (3) Fire extinguisher (3)
- (4) Fire alarm and telephone for emergency use should be available nearby (4)

Reference

(1) 29 CFR 1910.1450 APPENDIX A, D.6 (B); (2) 29 CFR 1910.1450 APPENDIX A, D.6(C); (3) 29 CFR 1910.1450 APPENDIX A, D.6(D); (4) 29 CFR 1910.1450 APPENDIX A, D.6(E)

131 11 008 LAB - SIGNS and LABELS

Are signs and labels posted as follows:

- (1) Emergency telephone numbers of emergency personnel, facilities, supervisors, and lab workers? (1)
- (2) Location signs for safety showers, eyewash stations, first aid equipment, and other safety equipment, areas where food and beverage consumption and storage are permitted? (1)
- (3) EXIT and NON-EXIT doors identified? (2)

Reference

DETAILED INSPECTION CHECKLIST

(1) CFR 29, PAR 1910.1450 AND C8; AND (2) CFR 29, PAR 1910.37

131 11 009 LAB - EMERGENCY PLAN

Does the Lab have a written emergency plan that includes procedures for:

- (1) Ventilation failure? (1)
- (2) Evacuation? (1)
- (3) Medical care? (1)
- (4) Reporting? (1)
- (5) Drills? (1)
- (6) Alarm activation? (2)
- (7) Firefighting action? (2)

Reference

(1) CFR 29, PAR 1910.1450, C-9; AND (2) NAFP 45, PAR 4-6.3

131 11 010 LAB - CHEMICAL HYGIENE PLAN

Does the Plan address what to do in case of:

- (1) Eye contact?
- (2) Ingestion?
- (3) Skin contact?
- (4) Spills and clean-ups?
- (5) Eating and smoking?
- (6) Horseplay?
- (7) Mouth suction?
- (8) Personal protection?

Reference

CFR 29, PAR 1910.1450

131 11 011 TEST - APPEARANCE (VISUAL TEST)

A. Is the Visual Quality Surveillance Test method 1010 followed? (Visual check for color, appearance and contaminants) (1)

B. Is a clean, round, transparent, glass bottle, 1 qt to 1 gal used? (2)

C. Is the fuel clear, bright, and free of water? (2)

Reference

(1) MIL-STD-3004 C, METHOD 1010, PAGE132; AND (2) NAVAIR 00-80T-109, PAR 9.5.1

131 11 012 TESTS - PARTICULATES

A. Are solid contaminants of 1 mg/l or more at aircraft dispensing points investigated and corrective actions taken?

DETAILED INSPECTION CHECKLIST

- B. Is fuel delivery stopped if solid contaminants of 2 mg/l or more at aircraft dispensing points is detected?

Reference

NAVAIR 00-80T-109, PAR 9.5.2

131 11 013 TESTS - FREE WATER

- A. Is test method 1060 (AEL MK-1 or 2) for determining free water in fuel followed? (1)

- B. Is a second sample taken if free water at an aircraft dispensing point exceeds 10 PPM? (2)

- C. Is fuel delivery stopped if free water in second sample exceeds 10PPM? (2)

Reference

(1) MIL-STD-3004 C, TEST METHODS, PAGE 144/145; AND (2)
NAVAIR 00-80T-109, PAR 9.5.3

131 11 014 FSII

Are Squadrons notified when the FSII level falls below:

(1) 0.03 percent for Navy S-3, US-3, and SH-60 aircraft?

(2) 0.07 percent for all Air Force, Army and other aircraft?

Reference

NAVAIR 00-80T-109, PAR 9.5.4

131 11 015 REGIONAL LAB REPORTS

- A. Where is the regional lab?

- B. Do the regional labs report test results to:

(1) CO of ship/activity (Original)?

(2) NAVAIR?

(3) TYCOM?

(4) NAVSUP ENERGY?

Reference

NAVAIR 00-80T-109, PAR 9.7.3

131 12 TRAINING

131 12 001 TRAINING - GENERAL

- A. Are personnel responsible for handling fuels and lubricants thoroughly trained and fully qualified to perform their assigned responsibilities?

DETAILED INSPECTION CHECKLIST

- B. Are personnel responsible for handling fuels and lubricants aware of the hazards in handling fuels and lubricants, as well as the applicable safety and operating procedures and responsibilities?

Reference

MIL-STD-3004C, PAR 4.1

131 12 002 CONTRACTING OFFICER REPRESENTATIVE (COR)

- A. Has the COR been appointed in writing by the Contracting officer and is the letter on file? (2)

- B. Is the COR properly training and qualified in contract administration? (1)(2)

- C. Did the COR have at least 80 hours of formal classroom training prior to assuming duties and responsibilities? (1)(2)

(NOTE: A COR Desk Guide can be downloaded from <https://www.acq.osd.mil> (conduct search to get course)

Reference

(1) NAVAIR 00-80T-109, PAR 8.2.1; (2) DFARS 201.602-2 AND AFARS 1.602-2-91

131 12 003 CONTRACTOR EMPLOYEES

- A. Are contractor employees company trained and certified? (1)

- B. Does the certification include written or oral examination and direct observation?

- C. Are records of training and certification on hand and COR verified?

Reference

NAVAIR 00-80T-109, PAR 8.2.1

131 12 004 PERSONNEL TRAINING/FORMAL TRAINING PLAN

- A. Are all fuels personnel trained via: (1)

- (1) Informal course in which the contents of the NATOPS, MIL-HDBK 844(AS), and NAVFAC MO 230 are taught? (1)

- (2) A series of apprenticeship programs (on-the job training) for each major system to be operates? (2)

- B. Does the training program contain a: (1)

- (1) A list of instructional/reference materials?

- (2) Minimum time required for obtaining certification?

DETAILED INSPECTION CHECKLIST

(3) Are personnel required to demonstrate their acquired knowledge?
(1)

C. Does the activity maintain a formal training document that outlines the apprenticeship program covering each major system and contains details on?

(1) Instructional materials?

(2) Minimum time requirements for certification?

Reference

NAVAIR 00-80T-109, PAR 8.2.1

131 12 005 DRIVER TRAINING

Do all fuel truck drivers attend an airfield indoctrination course?

Reference

NAVAIR 00-80T-109, PAR 8.2.1; AND NAVAIR 00-80T-114

131 12 006 DRIVER CERTIFICATION

A. Do all military and civilian drivers carry a U.S. Government Motor Vehicle Operator's Identification Card (OF-346)?

B. Are contractor personnel certified by the contractor as being fully qualified to operate vehicles?

C. Are contractor personnel licensed for the class vehicles they operate?

Reference

NAVAIR 00-80T-109, PAR 8.2.2

131 12 007 NOZZLE TRAINING and CERTIFICATION

Are nozzle operators trained and certified for the type, model, and series of aircraft being serviced?

Reference

NAVAIR 00-80T-109, PAR 8.2.3

131 12 008 ORIENTATION PROGRAM

Does the activity have an orientation program and does it include:

(1) A list of all instructions, manual, and guidance?

(2) Are required to read and understand? (Operations, safety?

(3) Security, fire protection, leave/overtime, etc.)?

(4) A familiarization tour of the facility?

(5) Info on the location of fire alarm station, speed limits?

(6) Accident reporting, smoking, work hours, etc.?

Reference

DETAILED INSPECTION CHECKLIST

NAVSUP P-558, PAR 7.2

131 12 009 COMPETENCY BASED CERTIFICATION (CBP) PROGRAM

Does the activity have a CBP for each work center and does it include:

- (1) A description of duties and responsibilities?
- (2) How and who will evaluate?
- (3) A check-off list of required equipment and procedures?
- (4) A time frame for completion?

Reference

NAVSUP P-558, PAR 7.3

131 12 010 SAFETY MEETINGS

Are safety meetings held at least once a month?

Reference

OPNAV 5100.23(Series)

131 12 011 FIRE and SPILL CONTROL TRAINING

- A. Are fires and spill control drills addressed periodically during safety training/meetings? (1) (2)
- B. Are actual fires and spill control drills conducted quarterly by/with the fire department? (1) (2)
- C. Are the following items addressed at the fire/spill control drills: (2)
 - (1) Fire and spill reporting procedures?
 - (2) Review of exit routes for employees and equipment?
 - (3) Location and use of firefighting equipment and materials?

Reference

(1) NAVSUP P-558, PAR 7.5.2; AND (2) NAVFAC MO-230, PAR 3.5.1.1

131 12 012 FIRE EXTINGUISHER TRAINING (Flight Line Operators)

- A. Do all fueling personnel receive flightline fire extinguisher training initially and annually thereafter? (1)
- B. Do terminal personnel receive instruction in the use of all firefighting equipment available at the terminal? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 10.4 AND (2) NAVFAC MO-230, PAR 3.5.1.1

121 12 013 OIL SKIMMER TRAINING

DETAILED INSPECTION CHECKLIST

- A. When applicable, is Oil Skimmer Training conducted at the activity? (1)
- B. Have assigned personnel been trained at the site and/or special location? (2)

Reference

(1) NAVSUP P-558, PAR 7.5.3; AND (2) NAVFAC MO-230, PAR 3.5.1.2

131 12 014 TRAINING RECORDS

Does the activity maintain auditable records, including records for individuals, on all training given/received?

Reference

NAVSUP P-558, PAR 7.7

131 12 015 FUEL CREW READY/TRAINING ROOM

Does the crew ready/training room have:

- (1) Dispatch desk?
- (2) Climate control?
- (3) Classroom with?
- (4) Chairs?
- (5) Blackboard?
- (6) Display board?
- (7) File cabinet?
- (8) Book shelves or cabinets for publications?
- (9) Lockers and dressing room?
- (10) Toilet and shower facilities?
- (11) Phone and other communication equipment?

Reference

NAVAIR 00-80T-109; PAR 11.11.2

131 13 MAINTENANCE and REPAIRS

131 13 001 RESPONSIBILITIES

- A. Does the FMO know that he/she is responsible to initiate all facility improvement and upgrade actions? (1)
- B. The Public Works Officer (PWO) or a similar entity is responsible for performing corrective maintenance on fuel-related facilities that, in the opinion of the Fuel Officer, are beyond the capability of his own personnel? Systems/facilities and support include: (2) (Also in Org and Resp)
 - (1) Fuel storage tanks?
 - (2) Piping?
 - (3) Receiving facilities?
 - (4) Shipping facilities?

DETAILED INSPECTION CHECKLIST

- (5) Waterfront structures?
- (6) Quality assurance?
- (7) Roads?
- (8) Electrical systems?
- (9) Fire protection systems?

Reference

- (1) NAVAIR 00-80T-109, PAR 13.2; AND (2) NAVFAC MO-230, PAR 1.1.4.7

131 13 002 GENERAL (See Enclosure/Excerpt)

- A. Does the activity have a preventive/planned maintenance (PM) program based on OPNAVINST 4790, NAVFAC MO-230, JFC 3-460-03 and the NATOPS Manual?? (1)
- B. Did the FMO implement an inspection program and does the program include: (2)
 - (1) Inspections of equipment and facilities prior to use?
 - (2) Inspections prior to major operations?
 - (3) Seasonal or special inspections?
 - (4) Routine inspections and checklists?
- C. Are personnel with maintenance ratings trained, available, and utilized in fuel operations during peaks in operational workload and, in like manner, are fuel operating personnel trained and utilized to perform operational and preventive type maintenance during slack periods of operations? (3)
- D. If any fuel equipment or facility is likely to be out of service for four months or more are then pumps, fans, motors, etc., given adequate protection either in place, or by transfer or storage? (4)

Reference

- (1) NAVAIR 00-80T-109, PAR 13.1; (2) NAVAIR 00-80T-109, PAR 13.3; (3) NAVFAC MO-230, PAR 1.1.4.7; AND (4) MIL-STD-3004C, PAR 5.9.6

131 13 003 MAINTENANCE AND REPAIR (GENERAL) (Also see ENVIRONMENTAL)

- A. Does the FMO know that he/she can get assistance/funds from DLA ENERGY when storing DLA-owned product?: (1)
 - (1) Funds/technical assistance to bring facilities into compliance with environmental regulations?
 - (2) Funds for environmental permits and compliance with environmental requirements?
 - (3) Funds/technical assistance for emergency repairs?

DETAILED INSPECTION CHECKLIST

- (4) Funds for recurring (annually or more frequent) costs such as permits, fees, waste disposal testing, environmental impact analysis, etc.?
- (5) Funds for recurring maintenance such as tank cleaning/coating, pipeline painting/pigging, dredging, disposal of bottom sediment, etc.?

B. Is NAVSUP Energy notified, and does it concur, before any major bulk storage tank or system is taken out of service or changed from one product to another? (2)

Reference

(1) DOD 4140.25M, CHAP 8; AND (2) NAVFAC MO-230, PAR 1.1.4.3

131 13 004 FUEL WORKSHOP

Does the fuel workshop have:

- (1) A good adequate size workbench?
- (2) Compressed air and electrical outlets?
- (3) Adequate storage space for tools?
- (4) Spare hardware items?
- (5) Accessories located adjacent to the bench?

Reference

NAVAIR 00-80T-109, PAR 11. 11.3

131 13 005 STORE ROOM

A. Is an adequate storeroom available for spare hoses, nozzles, filter and monitor elements, special tools, special clothing, test equipment, and fuel spill clean-up equipment?

B. Is the storeroom of sufficient space for orderly storage and located for ready access by fuels personnel?

Reference

NAVAIR 00-80T-109, PAR 11. 11.4

131 13 006 INSPECTION – PRIOR TO USE

Is new construction, out-of-service facilities, broken down equipment, and facilities and equipment that have been provided with corrective or programmed maintenance, inspected prior to acceptance or reactivation?

Reference

NAVAIR 00-80T-109, PAR 13.3.1

131 13 007 INSPECTION - DAILY (See Checklists)

A. Is a daily checklist (Figure 13-1) completed on all fuel delivery equipment that is in continuous use? (1)

DETAILED INSPECTION CHECKLIST

- B. Is a daily checklist (Figure 13-7) completed on all fuel storage/distribution facilities? (3)
- C. Has the checklist been expanded to include all locally specific storage/distribution facilities and equipment? (3)
- D. Hoses; Item #4: Is the entire length inspected for/and: (1)
 - (1) Cuts, cracks, abrasions, blisters, fuel saturation, exposed reinforcement material (replaced when visible)?
 - (2) Around couplings for slippage
 - (3) Stored in a manner that prevents twists, sharp bends or kinks?
 - (4) Hoses that are not used daily, protected from the sun to reduce ultraviolet deterioration?
 - (5) Both ends covered to prevent damage to threads and the induction of contaminants?
 - (6) Stored off the ground to prevent the collection of water and dirt?
 - (7) Are refueling hoses hydrostatic tested annually at 120 psi per ASTM D-380? (2)
- E. Is defective equipment removed from service? (1)
Reference
(1) NAVAIR 00-80T-109, PAR 13.3.3.1; (2) NAVAIR 00-80T-109, PAR 13.3.3.4.2 AND (3) NAVAIR 00-80T-109, PAR 13.3.6

131 13 008 INSPECTION - WEEKLY (see Checklists)

- A. Is a daily and weekly checklist (Figure 13-2) used/completed for the inspection? (1)
- B. Are weekly inspections performed by senior operators or fuel shop personnel? (1)
Reference
(1) NAVAIR 00-80T-109, PAR 13.3

131 13 009 INSPECTION - MONTHLY (see Checklists)

- A. Is a daily, weekly, and monthly checklist (Figure 13-3) used/ completed for the inspection?
- B. For the monthly inspection, is mobile equipment moved to a location other than the operating area?
Reference
(1) NAVAIR 00-80T-109, PAR 13.3.3.3;

DETAILED INSPECTION CHECKLIST

131 13 010 INSPECTION - ANNUAL and PERIODIC (RECORD UPDATE)

A. Are periodic inspections performed (Figure 13-4) and is the annual record updated? (1)

B. Are fuel depots and terminals inspected annually and are the results well documented (AIS)? (2)

Reference

(1) NAVAIR 00-80T-109, PAR 13.3.3.4; AND (2) NAVFAC MO-230, PAR 4.4.3.

131 13 011 INSPECTION – SEASONAL / SPECIAL

A. Are seasonal (winterization) inspections performed?

B. Are special inspections performed after storms, floods, fires, unusual occurrences, etc.?

Reference

(1) NAVAIR 00-80T-109, PAR 13.3.2;

131 13 012 INSPECTION - CATHODIC PROTECTION

Are cathodic protection readings taken quarterly,(by the FMO and annually by a licensed engineer) and permanently recorded?

Reference

NAVFAC MO-230, PAR 5.2.2.1

131 13 013 INSPECTION – ELECTRICAL

NOTE: Explosion proof is defined as being designed or manufactured with enough strength to contain an explosion and prevent the escape of flame or heat that could ignite surrounding atmospheres. (1)

A. Is electrical maintenance of fuel facilities generally carried out by public works electricians or outside contractors? (1) (2)

B. General inspection by operator/maintenance personnel (2)

(1) Correct size fuses installed?

(2) Correct size light bulbs installed?

(3) Switch/circuit breaker enclosures not warm/hot?

(4) Bolted cover equipment with all bolts in place and tight?

Reference

(1) NAVFAC MO-230, PAR 5.13.3; AND (2) NAVFAC MO-230, PAR 5.13.4

DETAILED INSPECTION CHECKLIST

131 13 014 INSPECTION - FILTER/SEPARATOR and FUEL MONITORS (See Checklist)

- A. Are F/S and monitors inspected daily, weekly, and monthly by use of the respective checklist? (See checklists) (1)
- B. Is a log, similar to Figure 13-5, maintained for each F/S and monitor? (1)
- C. Are all weekly readings plotted on a graph, as shown in Figure 13-6, and monitored/analyzed for trends? (1)
- D. Are F/S and monitor elements in refueling equipment and truck fill stands changed when: (2)
 - (1) The pressure drop across either filter or monitor reaches 20 psi?
 - (2) The combined pressure drop is above 25 psi?
 - (3) The graph of differential pressures turns downward indicating a rupture?
 - (4) The graph fails to increase after an extended period?
 - (5) The complete shutdown of fuel flow and/or a very rapid increase in pressure differential across the monitor elements?

Reference

(1) NAVAIR 00-80T-109, PAR 13.3.4; AND (2) NAVAIR 00-80T-109, PAR 13.3.5

131 13 015 INSPECTION – FIRE PROTECTION SYSTEMS

WATER SYSTEM:

- A. If the primary water supply is from a public or private main, is an annual flow test performed to establish the available flow and pressure at the connection? (1)
- B. If water supply is from ponds, bays, or rivers, are intakes inspected for obstructions? (1)
- C. Are water hydrants flushed semiannually? (1)
- D. Are nozzles in fog systems inspected monthly? (1)
- E. Where possible, are fog systems set off annually? (1)
- F. Are fire pumps tested/operated weekly for 15 minutes? (1)
- G. Are fire hydrants inspected monthly for damage and no obstruction? (1)
- H. Are fire hydrants flushed twice a year? (1)

DETAILED INSPECTION CHECKLIST

- I. Are fire hoses stored in covered, weather-tight hose shed and adequately supported to prevent damage? (1)
- J. Are fire hoses removed from storage once each quarter and restored in a different position? (1)
- K. Are fire hoses tested annually at 200 psi and held for no less than 5 minutes? (1)

CHEMICAL FOAM SYSTEM:

- L. Are foam agents periodically inspected and: (2)
 - (1) Are cans that are broken, leaking, or badly corroded replaced?
 - (2) Are cans clearly marked and segregated between "A" and "B" powder?
 - (3) On a random basis, are about 2% of the cans opened and sampled for caking of the powder?

MECHANICAL FOAM SYSTEM:

- M. Once a year, are samples of liquid foam concentrate taken and inspected for signs of excessive sludge formation or other deterioration? (3)
- N. Are liquid foam concentrates stored at temperatures between 20 and 120 degrees F? (3)
- O. Are storage containers and connected piping inspected for leaks and corrosion? (3)

FOAM PROPORTIONER SYSTEM

- P. Monthly - is the proportioning system inspected for physical damage, missing Parts, leaks, corrosion or deterioration? (4)
- Q. (Quarterly) - Is the liquid foam concentrate pump operated? (4)
- R. (Quarterly) - Are all valves operated and strainers cleaned? (4)
- S. (Yearly) - Is the foam proportional operated and a sample obtained and analyzed to ensure proper concentrate to water mixture? (4)
- T. (Every 5 years) - Is a full-scale foam-making test run? (4)

FOAM SOLUTION PIPING

DETAILED INSPECTION CHECKLIST

- U. Is the piping system tested annually at 150 psig for 30 minutes and inspected for leaks and defects? (5)

SYSTEM MARKINGS

- V. Are all foam systems, equipment, and valves clearly marked to indicate their individual purpose? (5)
- W. Does each foam pump house have a diagram of the proportioning and distribution system and are valves marked by individual signs to indicate their function; e.g. "FOAM TO TANK #97"? (5)

PORTABLE FIRE EXTINGUISHERS

- X. Water (pump) - yearly; empty, test, refill (6)
- Y. Soda-Acid/Chemical Foam Type - yearly; discharge and recharge; hydrostatic test every 5 years (6)
- Z. CO₂ - every 6 month, weigh and recharge if weight loss exceeds 10 percent; hydrostatic test every 5 years (6)
- AA. Dry Chemical - charge when pressure gauge goes below normal operating range; every 5 years, completely discharge and recharge; hydrostatic test every 10 years (6)
- BB. Halon 1211 - disassembles and maintain in accordance with manufacturer instructions on an annual basis (6)
- Reference
(1) NAVFAC MO-230, PAR 5.14.2; (2) NAVFAC MO-230, PAR 5.14.3.1
(3) NAVFAC MO-230, PAR 5.14.3.2; (4) NAVFAC MO-230, PAR 5.14.3.3
(5) NAVFAC MO-230, PAR 5.14.3.-4 AND (6) NAVFAC MO-230, PAR 5.14.4.2

13113 016 INSPECTION - GROUNDS/BONDS

- A. Are connections to ground periodically tested with an ohmmeter?
- B. Does the resistance exceed the 25 ohms maximum for equipment, systems, etc., and 10,000 ohms for static grounds?

Reference
NAVFAC MO-230, PAR 5.13.8.3

131 13 017 INSPECTION - HOSES

- A. Are hoses handled and inspected for: (1)
- (1) Outer jacket for cuts, gouges, tears, bulges, blisters, cracks, etc.?

DETAILED INSPECTION CHECKLIST

- (2) Nipples and flanges for signs of leaks, slippage, cracks, etc.?
 - (3) Markings; i.e. last date tested, safe working pressure, class of service, etc.?
 - (4) Stowed flat and uniformly supported?
 - (5) Protected from the sun and weather?
 - (6) Ends closed/sealed during storage?
- B. Are hoses pressure tested at 1 ½ times the rated working pressure for at least 15 minutes? (1)(4)
- C. Are tanker/barge hoses (Oil Suction and Discharge hoses (OS&D) with an inside diameter of 3 inches and greater tested annually? (2)
- D. Are OS&D hoses tested under static liquid pressure at least as great as the relief valve setting or maximum pump pressure plus static head pressure of the system? (2)
- E. Does OS&D hoses burst, bulge, leak, or abnormally distort during pressure test? (2)
- F. Are OS&D hoses removed from service if: (2)
- (1) Fails pressure test?
 - (2) Jacket is worn/torn to expose reinforcement?
 - (3) Hose is kinked/crushed that outside diameter is 30% less than normal?
- G. Do underwater hoses have a working pressure of 225 psig or more and are they tested every 2 years? (3)
- H. Is Aircraft Fueling Hoses inspected and pressure tested less than 1 ½ time the normal operating pressure (such practice may weaken the hose and cause ruptures)? (5)

Reference

- (1) NAVFAC MO-230, PAR 5.11.2; (2) NAVFAC MO-230, PAR 5.11.3.
(3) NAVFAC MO-230, PAR 5.11.4; (4) NAVFAC MO-230, PAR 5.11.5/6
AND (5) NAVFAC MO-230, PAR 5.11.6.2

131 13 018 INSPECTION - METERS

- A. Are meters calibrated periodically by a portable volumetric prover, a calibrated master meter or a pipeline prover? (1)
- B. Are meters calibrated semiannually IAW API standards? (2) (3)

Reference

- (1) NAVFAC MO-230, PAR 5.10.3.2; (2) NAVSUP P-558, Exhibit 3-5, PG 3-26 AND (3) DOD 4140.25M, PAR 5F (4)

DETAILED INSPECTION CHECKLIST

131 13 019 INSPECTION – PIPELINES

Are pipelines and pipeline supports inspected annually for:

- (1) Cracks?
- (2) Corrosion?
- (3) Misalignment?
- (4) Missing Parts?
- (5) Damage?
- (6) Movement of rollers/wear on pipeline?
- (7) Movement of springs/wear on pipeline?
- (8) Sight along the run of the pipeline and observe for deflection between successive supports?

Reference

NAVFAC MO-230, PAR 5.2.12

131 13 020 INSPECTION - PIPELINE PRESSURE TESTING

NOTE: Before conducting pressure tests, the impact of a rupture or failure of a piping system during the test must be thoroughly considered. In some cases, the benefits of a pressure test may be outweighed by the potential problems if the system fails. Ref MO-230-5.2.6)

- A. Are pipeline pressure tests conducted annually IAW references? (1) (2)
- B. Is the pipeline to be tested isolated from the system? (1) (2)
- C. Are drains provided at low points and bleeder vents at high points? (1) (2)
- D. Is an automatic relief valve or other device available to prevent over-pressurization? (1) (2)
- E. Is test pressure held at 125 % operating pressure for 4 hours on observable pipelines and 110% operating pressure for 4 hours on non-observable pipeline? (1) (2)

Reference

(1) NAVFAC MO-230, PAR 5.2.6.1/2 AND (2) UFC 2-460-03, CHAP 2

131 13 021 INSPECTION - PUMPS

Are pumps inspected quarterly for:

- (1) Excessive vibration during operation?
- (2) Heat radiating from bearings, packings, etc.?
- (3) Unusual noises?
- (4) Leaks?
- (5) Loose bolts, cracks, etc.?

DETAILED INSPECTION CHECKLIST

(6) Cleanliness?

(7) Lubrication?

Reference

NAVFAC MO-230, PAR 5.6.2

131 13 022 RECORDS AND REPORTS (Maintenance)

Are maintenance records and reports tailored to the individual terminal/fuel department and do they contain:

- (1) Identify each major structure, equipment item, group of items, or system?
- (2) Current maintenance status of each, including unfounded deficiencies and uncompleted job orders?
- (3) Past maintenance history of each, including description of cost of major repairs or replacements?
- (4) Additional information, as required, for Annual Inspection Summary (AIS) input?
- (5) Recommendations for future programmed repairs or replacements, including estimates of funds or manpower requirements?
- (6) Scheduled for future inspections, tests, or maintenance procedures?

Reference

NAVFAC MO-230, PAR 4.3.1

131 13 023 HISTORICAL RECORDS

Are historical records available and are original manufacturer's operating/maintenance manuals and Part lists preserved?

Reference

NAVFAC MO-230, PAR 4.3.2

131 14 SAFETY

131 14 001 SAFETY - GENERAL

- A. Are safety meetings held at least once a month and are current and important safety material discussed? (1)
- B. Are all fuels personnel completely familiar with MIL-HDBK-844A (AS), Aircraft Fueling Handbook? (2)
- C. Whenever a major fuel accident is being investigated, does the activity request outside assistance (NAVAIR, NAVSUP ENERGY, and TYCOM)? (2)

Reference

(1) OPNAV 5100.23 (SERIES) AND (2) NAVAIR 00-80T-109, PAR 10.1

DETAILED INSPECTION CHECKLIST

131 14 002 FUEL SERVICING - GENERAL

A. Do fueling personnel discontinue any fuel operation that does not appear to be progressing in a normal fashion (e.g.; appears to be taking much longer than would normally be expected, or pressures are too high, etc.) or when a safety violation is in evidence, and notify the FO/FMO? (1)

B. Is leaking or malfunctioning equipment removed from service? (2)

C. Are all fuel spills reported immediately to the Activity's Environmental Coordinator IAW the local SCP? (2) (3)

Reference

(1) NAVAIR 00-80T-109, PAR 12.1; (2) NAVAIR 00-80T-109, PAR 12.2.1. AND (3) NAVAIR 00-80T-109, PAR 12.2.1.4

131 14 003 FUEL SPILLS - GENERAL

A. When a spill is observed, are the operation immediately stopped and the supervisor notified? (1)

B. Are all spills investigated to determine the cause, whether emergency procedures were properly carried out, and what corrective measures are required? (1)

Reference

(1) NAVAIR 00-80T-109, PAR 12.2.1;

131 14 004 FUEL SPILLS - CLASSIFICATION

A. Priming Spills. Pint-size spills, involving an area less than 18 inches in any dimension, require no emergency action during cold refueling operations; however, ramp personnel shall stand by with a fire extinguisher until operations are completed and/or the aircraft departs.

B. Small Spills. Small spills involving an area of from 18 inches to 10 feet in any dimension shall have a fire guard posted, equipped with at least one fire extinguisher.

C. Large Spills. Large spills covering an area greater than 10 feet in any dimension or over 50 square feet in area require handling by the Spill Response Team. The team will be summoned immediately and all other personnel evacuated to a safe distance.

Reference

NAVAIR 00-80T-109, PAR 12.2.1.1/2/3

131 14 005 FIRE SAFETY - GENERAL

All activities shall:

DETAILED INSPECTION CHECKLIST

- (1) Perform no top loading of trucks, tanks, and vessels (1) (3)
- (2) Fill empty filter/separators or monitors slowly (1)
- (3) Keep tanks free of floating objects; no devices in tanks during receipt (1)
- (4) Bond fueling equipment (nozzles) to aircraft (1)
- (5) Ground equipment for hot refueling (1)
- (6) Inspect bond cables/plugs daily (1)
- (7) Avoid fueling operations during electrical storm (1)
- (8) Remove refuelers from aircraft parking area during electrical storm (1)
- (9) Require personnel to wear non-static clothing (1)
- (10) Prohibit wearing shoes with nails or metal devices (2)
- (11) Check equipment for holes, cracks or breaks in exhaust piping (2)
- (12) No smoking, spark-/flame-producing devices, open flames, or hot work within 50 ft of any refueling operations (2), 100 feet (3)
- (13) No maintenance on fueling equipment/aircraft during fueling operation (2) (3)
- (14) No LOX within 50 ft of fueling operation (2)
- (15) No fueling within 300 ft of ground radar equipment (2)
- (16) No equipment without spark arrestors within 50 feet (2); 100 feet (3)
- (17) Keep gauge tape in contact with the gauge hatch during gauging operation (3)
- (18) Do not allow fuel to accumulate in valve pits, pump room drains, or dike sumps (3)
- (19) Firefighting equipment and extinguishers are in good condition and readily available (3)

Reference

(1) NAVAIR 00-80T-109, PAR 10.2.1; (2) NAVAIR 00-80T-109, PAR 10.2.2 AND (3) NAVFAC MO-230, PAR 1.3.2.4

131 14 006 VAPORS - REDUCTION

All activities shall:

- (1) Not handle aviation fuel in open containers
- (2) No fueling operation in confined area (hangar)
- (3) Avoid spilling fuel and clean any spill immediately
- (4) Properly dispose of oily rags and waste fuel
- (5) Not move leaking feelers
- (6) Never top load/splash fill tanks
- (7) Keep all equipment clean
- (8) Never use fuel as cleaning agent

Reference

NAVAIR 00-80T-109, PAR 10.3;

DETAILED INSPECTION CHECKLIST

131 14 007 HEALTH HAZARD - REDUCTION

All activities shall:

- (1) Avoid entering enclosed areas where fuel vapors are present (1)
- (2) Have good ventilation of workspaces (1)
- (3) Stay upwind during fueling operations (1)
- (4) Stop fueling operations and move to fresh air location immediately if feeling dizzy or nauseated (1)
- (5) Avoid skin contact with fuel (1)
- (6) Remove fuel-soaked clothing immediately (1)
- (7) Wear eye protection and clothing that leaves a minimum amount of skin exposure during refueling operation (1)
- (8) Not wear shoes made of fabric or other absorbent materials (1)
- (9) Provide the necessary safety equipment for personnel that are involved in fuel operations that require them to be more than 4ft off the ground (2)

References

(1) NAVAIR 00-80T-109, PAR 10.5; AND (2) NAVFAC 5100.8, CH 18

131 14 008 CONFINED SPACES

- A. Are all confined or enclosed spaces and un-vented deep pits (over 5 ft) well ventilated and tested prior to entry?
- B. Do all personnel comply with NAVSEA S6470-AA-SAF-010, US NAVY Gas-Free Engineering Program and NAVOSH Manual 5100.23 B?

Reference

NAVAIR 00-80T-109, PAR 10.6;

131 15 SECURITY

131 15 001 PHYSICAL SECURITY – Responsibilities

- A. Has the CO publish a consolidated list (annually) of all restricted areas?
- B. Does the CO provide sufficient resources to implement manage and execute an effective security program?

Reference

MCO P5330.14A

131 15 002 PHYSICAL SECURITY

- A. Are Physical Security Surveys of the fuel facilities conducted annually?
- B. Does the Physical Security Survey include a complete study and analysis of the activities' property and operation, as well as the physical security measures in effect?

DETAILED INSPECTION CHECKLIST

C. Does the Physical Security Survey include the examination of:

- (1) Physical security?
- (2) Electronic security systems?
- (3) Automatic entry control systems?
- (4) Intrusion detection systems?
- (5) Locks?
- (6) Lighting?
- (7) Barriers?
- (8) Training?

D. Does the fuel activity have a system for the daily after-hour checks of restricted areas, facilities, barriers/buildings, and ingress and egress points?

Reference

MCO P5530.14A, CHAP 3, PAR 3001

131 15 003 SECURITY EDUCATION PROGRAM

- A. Does the program include all assigned personnel; military, civilian and contractor?
- B. Do all personnel receive initial security instructions to ensure that they understand the need for security?
- C. Is refresher training given to ensure that personnel remain mindful of and proficient in meeting security requirements?
- D. Is the training documented in the training record?

Reference

MCO P5530.14A, CHAP 2, PAR 2007

131 15 004 PROTECTION OF BULK PETROLEUM PRODUCTS / ASSETS

- A. Have GOGO and GOCO DFSPs, pipeline pumping stations, and piers been designated by the Commander as Restricted Areas and so posted? (Not applicable to gas stations)
- B. Is access to restricted facilities controlled and only authorized personnel permitted to enter?

Reference

MCO P5530.14A, CHAP 7

131 15 005 WATERSIDE AND WATERFRONT SECURITY

- A. Are waterfronts (including all piers, wharves, docks, etc.) been designated as restricted areas?

DETAILED INSPECTION CHECKLIST

B. Are barriers available to prevent direct unchallenged access onto piers, wharves, or docks when ships are moored?

C. Are barriers closed at all times when not opened to facilitate ship movement?

Reference

MCO P5530.14A CHAP7, PAR 7005

131 15 006 BARRIERS and OPENINGS

A. Are there sufficient barriers to control, deny, impede, delay and discourage access by unauthorized personnel?

B. Is access through openings to restricted areas controlled or are the openings secured against surreptitious [sneaky] entry?

C. Do security force personnel check restricted area perimeter barriers at least weekly for defects that would facilitate unauthorized entry and report defects to supervisory personnel?

D. Do the checks include:

(1) Damaged areas?

(2) Deterioration?

(3) Erosion of soil?

(4) Growth in the clear zones that would afford cover for possible intruders?

(5) Obstructions that would afford concealment or aid entry/exit for intruders?

(6) Signs of illegal or improper intrusion or attempted intrusion?

Reference

MCO P5530.14A, CHAP 5, PAR 5000/1/2/4

131 15 007 FENCES

Are they properly installed and maintained?

Reference

MCO P5530.14A, CHAP 5, PAR 5006

131 15 008 CLEAR ZONES

A. Are unobstructed area/clear zones, 30 feet inside and 20 feet outside, maintained on the restricted area fence? (Alternatives are increasing the height of the fence, extending outriggers, etc.)

B. Does the vegetation in such areas not exceed 6 inches?

Reference

MCO P5530.14A, CHAP 5, PAR 5012

DETAILED INSPECTION CHECKLIST

131 15 009 PROTECTIVE LIGHTING

- A. Is there adequate illumination to discourage or detect attempts to enter restricted areas and to reveal the presents of unauthorized persons within such area?
- B. Has the use of protective lighting, closed circuit television or infrared lighting been considered?
- C. Is emergency power for protective lighting available at restricted areas and is it tested at least quarterly?

Reference

MCO P5530.14A, CHAP 3, PAR 3011

131 15 010 SIGNS AND POSTING OF BOUNDARIES

- A. Do signs at points of entry to restricted areas read? (1)

WARNING

RESTRICTED AREA – KEEP OUT

AUTHORIZE PERSONNEL ONLY

AUTHORIZED ENTRY INTO THIS RESTRICTED AREA
CONSTITUTES CONSENT TO SEARCH OF PERSONNEL
AND PROPERTY UNDER THEIR CONTROL

INTERNAL SECURITY ACT OF 1950 SECTION 21; 50 U.S.C. 797

- B. Do signs at boundaries of restricted areas read?

WARNING

RESTRICTED AREA

KEEP OUT

Authorized Personnel Only

- C. And are they posted along restricted area boundaries not to exceed 100 feet?

- D. Do signs at perimeter boundaries read?

U.S. GOVERNMENT PROPERTY

NO TRESPASSING

- E. And are they posted along the perimeter boundaries not to exceed 200 feet?

DETAILED INSPECTION CHECKLIST

F. Are signs written in other than English language when appropriate for the stated purpose?

Reference

MCO P5530.14A, CHAP 3, PAR 3004

131 15 011 WAIVERS and EXEMPTIONS

Are waivers/exemptions in place when mandatory security requirements are not met? (At overseas locations, host nation may have ultimate responsibility for security)

Reference

MCO P0.5530.14A CHAP 1, PAR 1008

131 16 ENVIRONMENTAL PROTECTION

131 16 001 ENVIRONMENTAL PROTECTION – GENERAL

- A. Verify all fuel handling personnel are familiar with the local oil spill contingency plan. Ask a random selection of personnel what type of spill plan they have, where the plan is located and to show them, if located on site. List who the first responder to a spill. (1)(2)
- B. Indicate where the environmental records are kept; on-site, at the base environmental office, or somewhere else. (1)
- C. Determine if noncompliance issues have been resolved by reviewing a copy of the previous report, consent orders, compliance agreements, NOVs, interagency agreement, or equivalent state enforcement action.
- D. Request a copy of current and prior year funding requests, MIPRs, submitted to DLA Energy Environmental for the following items. If no requests, seek explanation. (3)
 - (1) Technical assistance to bring facilities into compliance with environmental regulations
 - (2) Recurring (annually or more frequent) costs such as permits, fees, waste disposal testing, environmental impact analysis, etc.
 - (3) Reimbursement of cleanup costs from a spill,
 - (4) Funds for restoration of grounds, repairs, etc., or
 - (5) Removal and disposition of hazardous POL waste.

Reference

(1) MCO P5090.2A; (2) NAVAIR 00-80T-109, PAR 12.2.1.4; (3) DoD 4140.25M, CHAP 8

131 16 002 MANAGEMENT PLANS

- A. Determine which of the following plans the facility has and indicate when they were last revised.

DETAILED INSPECTION CHECKLIST

B. If the Integrated Contingency Plan (ICP) accounts for multiple plans, list all plans the ICP incorporates. If the facility does not have a plan, write 'None.' (1) (2)

- (1) Area Contingency Plan (1)
- (2) Integrated Contingency Plan? (2) (3)
- (3) Spill Prevention, Control, and Countermeasure (SPCC) Plan? (4) (5)
- (4) Spill Contingency Plan? (1)
- (5) Facility Response Plan? (6) (7)
- (6) Marine Terminal Response Plan? (8)
- (7) Onshore Pipeline Response Plan? (9)
- (8) Offshore Facility Spill Response Plan? (10)
- (9) Stormwater Pollution Prevention Plan (SWPPP)? (11) (12)
- (10) Risk Management Plan for regulated chemicals? (13)
- (11) Pollution Prevention Plan? (14)

Reference

(1) MCO P5090.2A; (2) DOD 4140.25M, CHAP 8; (3) 49 CFR 194, APPENDIX A; (4) MCO P5090.2A 7104.1(E); (5) 40 CFR 112.7; (6) MCO P5090.2A 7104.2; (7) 40 CFR 112.20; (8) 33 CFR 154, SUBPART F; (9) 49 CFR 194; (10) 30 CFR 254; (11) 40 CFR 122.26; (12) MSGP SECTORS S AND P; (13) 40 CFR 68 SUBPART G; (14) E.O. 13423

131 16 003 SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN

A. Review the SPCC Plan, does the plan include:

- (1) Plan review log
- (2) Full management approval and commitment of resources
- (3) Description of physical layout of facility, including oil storage, drainage and containment features, pipelines, and locations of spill response materials
- (4) Detailed facility diagram showing location and contents of each container/tank, buried tanks managed under UST regulations, transfer stations, and piping
- (5) Routine operational procedures to prevent spills
- (6) Procedures to respond to spills, including contact list, waste disposal procedures, spill reporting requirements (unless an FRP under 40 CFR 112.20 is in place)
- (7) Evaluation of potential equipment failures and direction, rate of flow, and total quantity of fuel/oil which could be discharged
- (8) Description of general secondary containment features (for example, facility storm water drainage), including design and operating procedures
- (9) Bulk storage container management including contents, sized secondary containment, management and drainage of diked areas, integrity testing of tanks, liquid level alarm devices

DETAILED INSPECTION CHECKLIST

- (10) Inspections and testing procedures and results of equipment
- (11) Training description for all employees involved in oil-handling operations
- (12) Security
- (13) Facility tank car and tank truck loading/unloading rack procedures
- (14) Description of facility transfer operations, piping management, pumping, and facility process
- (15) Contact list and phone numbers for the facility response coordinator (Qualified Individual), National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge (including DLA Energy Environmental via email).

- B. Ensure the SPCC Plan is kept on site and available to review by regulator. 40 CFR 112.1(b), (d), and 112.3(e).
- C. Review the SPCC and determine if the plan was reviewed and certified by a Registered Professional Engineer (PE) who is familiar with the site and the requirements.
- D. Find out when the document was last updated. SPCC Plan should be reviewed every 5 years by management and the review should be documented, even if no changes occur. A PE is not necessarily required.
- E. Ensure a Registered PE reviewed and re-certified technical modifications to the SPCC Plan and that these changes were submitted to Regional EPA Administrator within 60 days along with the USEPA issued facility identification number.
- F. Confirm the Fire Department and other emergency responders have a copy of the SPCC?

Reference

40 CFR 112.7; MCO P5090.2A, 7104.2

131 16 004 FACILITY RESPONSE PLAN (FRP)

- A. Review the facility's FRP to ensure the following information is included:
 - (1) An individual who can be reached on a 24-hour basis and has the authority to take necessary response action;
 - (2) An emergency section of the plan that provides concise response direction;
 - (3) Extensive drills and exercises with specified documentation and record-keeping;
 - (4) A provision for regular update and review of FRPs; and

DETAILED INSPECTION CHECKLIST

(5) Provisions for responding to spills up to and including worst case discharge (WCD).

B. Verify that a facility's FRP includes the Navy On-Scene Coordinator (NOSC) as part of the Spill Management Team for WCDs in order for the facility to receive credit when the NOSC responds to a facility incident or conducts WCD exercises.

Reference

MCO P5090.2A, PAR 7104.3

131 16 005 OIL AND HAZARDOUS SUBSTANCES SPILL CONTINGENCY PLAN (OHSSCP)

A. OHS SCPs are required for any facility that stores oil or hazardous substances and does not meet Federal requirements for preparing another response plan (SPCC, FRP, ICP).

B. Review the facility's OHSSCP to ensure it details the following aspects:

- (1) Pre-emergency planning and coordination with outside parties;
- (2) Personnel roles, lines of authority, training, and communication;
- (3) Emergency recognition and prevention;
- (4) Safe distances and places of refuge;
- (5) Site security and control;
- (6) Evacuation routes and procedures;
- (7) Decontamination;
- (8) Emergency medical treatment and first aid;
- (9) Emergency alerting and response procedures, including contacting the On Scene Coordinator and chain of command;
- (10) Critique of response and follow-up; and
- (11) PPE and emergency equipment.

C. Ensure the document is reviewed annually. MCO P5090.2A 7104.4.f

D. According to the facility's spill plan, list the designated person who is accountable for oil spill prevention and emergency response if a spill occurs, such as the Qualified Individual (QI) or the Emergency Response Coordinator. As defined in the Oil Pollution Act of 1990, the QI is identified in spill response plans who:

- (1) Is available on a 24-hour basis and able to arrive at the facility in a reasonable time.
- (2) Is familiar with the implementation of the plan.
- (3) Is trained in the responsibilities of the QI under the plan.
- (4) Has authority to activate the OHS spill response organization.
- (5) Has authority to direct the obligation of funds required to carry out response activities.

DETAILED INSPECTION CHECKLIST

(6) Will act as liaison with the pre-designated Federal/USMC On-Scene Coordinator.

E. Ensure the OHSSCP is available for inspection and to copy by employees and OSHA personnel.

Reference:

MCO P5090.2A, PAR 7104.4; 29 CFR 1910.120(Q)(2)

131 16 006 ENVIRONMENTAL PERMITS

A. Verify if the facility has any of the following permits and obtain below information. Unless stated otherwise by state or regional regulations, these permits must be on-site or readily available for inspectors.

<u>Environmental Permit</u>	<u>Permit No.</u>	<u>Date Issued</u>	<u>Date Expires</u>
Air Emission Operating Permit MCO P5090.2A 6104.4a, 6105.36			
Air Emissions Construction Permit MCO P5090.2A 6104.9			
Wastewater Discharge (NPDES) MCO P5090.2A 20104.2(b)			
Stormwater Permit (NPDES) MCO P5090.2A 20104.2(b)			
Stormwater Permit for Construction MCO P5090.2A 20104.2			
Sewer Discharge Permit MCO P5090.2A			
UST Operating Permit/Registration *State/Local Requirement			
AST Operating Permit/Registration *State/Local Requirement			
Hazardous Waste Treatment Storage or Disposal Facility, Part B *State/Local Requirement & RCRA			
Other, please list:			

**State/Local Requirement: Need to check with state and/or regional regulations

DETAILED INSPECTION CHECKLIST

to determine if permit is required.

131 16 007 SPILL REPORTING

A. Request spill records for the last two years for verification of availability and ensure they include: (1) (2)

- (1) Name, location-address, organization, and telephone number
- (2) Name and address of party responsible for the incident
- (3) Date and time of the incident
- (4) Location of the incident
- (5) Source and cause of the discharge
- (6) Type(s) of materials discharged
- (7) Total quantity of materials discharged (in gallons)
- (8) Danger or threat posed by the discharge
- (9) Number and types of damages or injuries (if any)
- (10) Weather conditions at the incident location
- (11) Cleanup action (used to stop, remove, and mitigate the effects of the discharge)
- (12) Individuals, organizations, and agencies notified.

B. Ensure that all fuel spills were reported immediately to the National Response Center (NRC). (1) (2)

C. Is an oil spill report/message prepared and submitted IAW the format stated in MCO P5090.2A Appendix E? (2)

D. Are the following groups included in the notification process?

- (1) On-Scene Coordinator (OSC)
- (2) Reporting Chain of Command
- (3) Area Environmental Coordinators
- (4) National Response Center (NRC)
- (5) CMC Washington DC, I-L
- (6) COMDT COGUARD Washington DC (U.S. spills only)
- (7) Coast Guard MSO Area Coordinator (Marine U.S. spills only)
- (8) Higher Headquarters (if applicable)
- (9) COMNAVFACENGCOM Alexandria, VA
- (10) NFESC Port Hueneme CA, 424
- (11) NAVSUP Energy Office
- (12) DLA Energy via email, desc.spillreports@dla.mil

Reference

40 CFR 112.7; MCO P5090.2A, APPENDIX E

NOTE: DLA Energy Environment will provide funding for DLA-sponsored fuel spills. In order to request funding, email the DLA Energy Environment Office after the notification has been emailed, providing an invoice or other document breaking down what the costs are/were for cleanup. Salaries for civilian and military members cannot be included on the invoice.

DETAILED INSPECTION CHECKLIST

131 16 008 ABOVEGROUND STORAGE TANKS

- A. For spill prevention, list what type of level gauging systems and alarms each tank has; include tank name and/or number for reference.
Options include: high-level alarms, high liquid pump cutoff devices, communication system between the tank gauge and pump station, liquid level meters-such as digital computers, telepulse system, or visual gauges, liquid level sensing devices, relief valves and overflow lines. (1)
- B. Inspect ASTs that contain hazardous materials to ensure they are labeled with the chemical name and hazard warning, and ask to see the corresponding MSDS(s) kept on file on site for the material(s)? (2)
- C. Supply the most current site drawings or facility diagrams showing tank locations. (3)
 - (1) State when diagrams drafted.
 - (2) Ensure the diagram corresponds to the real time layout of the tanks and note any discrepancies.
- D. Make available the following AST records (retain minimum of 3 years):
 - (1) On site, readily accessible to all, tank name, number or location; tank material; Capacity (gallons); date installed; material stored (JP-5, MOGAS, etc.); and vapor pressure of material stored (psia).
 - (2) Visual tank inspection records (addressing tank supports, foundations, flow valves, pumps, flange tanks, expansion joints, etc.). (4)
 - (3) Tank integrity test results (e.g., hydrostatic test, shell thickness tests). (5)
 - (4) Containment system drainage or pumping records (date, time, personnel). (6)
 - (5) AST service, repair, maintenance, and cleaning records. (6)
 - (6) Written notification to EPA or the state agency for construction, reconstruction, or modification of petroleum storage tanks or terminals. (7)
- E. Per containment system drainage records, list the secondary containment systems that are in place for each tank/area (earthen berm, lined earthen berm-specify liner material, concrete retaining walls, double-walled or double-bottom tanks, etc.). Inspect the site to ensure the records are accurate. (8)
- F. Review containment record and list the type of valves in the containment system for drainage. Observe if the valves were closed or open during inspection. If no valves, ensure the containment area is

DETAILED INSPECTION CHECKLIST

equipped with a diversion system to retain oil in the facility in the event of an uncontrolled discharge. (9)

- G. During containment system inspection, note any liquid observed, description of liquid, and location. (10)
- H. Provide information on the type of roof each storage tank has with the corresponding tank name and/or number. Roof options include fixed roofs with or without internal floating roofs, external floating roofs with primary seals, or external floating roofs with primary and secondary seals. (11)
- I. Review the roof tank records to ensure:
 - (1) Gap measurements are completed every 5 years for the external floating-roof tanks with primary seal, and annually for external floating-roof tanks with secondary seals. (12)
 - (2) Seals and fittings are inspected each time the tank is emptied and degassed, and if the agency was notified prior to filling. (13)
 - (3) For internal floating-roof tanks that visual inspections of the primary and secondary rim seals are conducted annually with written agency notification prior to filling or re-filling the tanks after the tanks after inspection. (14)

Reference

(1) 40 CFR 112.8 (B) AND 112.8 (C)(8); (2) 29 CFR 1910.1200(F)(5); (3) 40 CFR 112.7 (A)(3); (4) 40 CFR 112.7(E); (5) 40 CFR 112.8(C)(6); (6) 40 CFR 112.8(C)(3); (7) 40 CFR 60.7(A)(1); (8) 40 CFR 112.7(C) AND 112.8(C)(2); (9) 40 CFR 112.8 (B)(2) AND (D)(4); (10) 40 CFR 112.8(C)(3) AND (10); (11) 40 CFR 60.113A, 60.113B; (12) 40 CFR 60.113A(A) AND 40 CFR 60.113B(B); (13) 40 CFR 60.113B(B)(6); AND (14) 40 CFR 60.113B(A)

131 16 009 Air Emissions

- A. Review tank records to determine if there are vapor recovery systems in the tanks with petroleum liquid.
- B. If the facility has an air permit, request emission level data to determine if emission levels have changed since the permit was received.
- C. List the emission control devices associated with the facility's operations, if any.
- D. Review any nuisance (odor, smoke, noise) complaints the facility received from neighbors. List the type of nuisances.

Reference

40 CFR 60.112

DETAILED INSPECTION CHECKLIST

131 16 010 Training

- A. Verify that all facility oil handling personnel involved with installation, management, and operation of storage tanks receive initial training to prevent discharges and all personnel attend annual spill response briefings. Request to review attendance sheets and presentation notes for these trainings for the last 3 years.
- B. Appropriate training includes, as applicable: - contents of the installation/facility SPCC Plan – general facility operations - Federal, state, and local regulations - spill response procedures - standard operating procedures for transfers of oil or filling tanks - corrosion protection measures - compliance records - release detection reporting, investigation, and confirmation - corrective action plans – closure, site assessment, monitoring, removal, repair, retrofit, replacement, remediation, leak detection and product inventory requirements, recordkeeping, and operation of monitoring systems.

Reference

40 CFR 112.7(f)

131 16 011 UNDERGROUND STORAGE TANKS

- A. Indicate which USTs are double-walled tanks, labeled by tank name or number or write “None” or “All” if applicable. (1)
- B. List the leak detection methods used for each UST (automatic tank gauging system, vapor monitoring, groundwater monitoring via well sampling, interstitial monitoring, inventory control, manual gauging, and tightness testing, other), labeled by tank name or number. (2)
- C. Make available the following UST records:
 - (1) UST registration or notification forms submitted to the appropriate state agencies. (3)
 - (2) Cathodic protection system inspection reports. (4)
 - (3) Leak detection system monitoring results. (5)
 - (4) Tank tightness test results. (6) (7) (8)
 - (5) UST system repairs. (9)
 - (6) UST closure or change of service notification. (10)
 - (7) UST site assessment and corrective action report. (11)
- D. Observe the tank filling operations, review records, and inspect spill catchment basins and the ground around the fill-lines for visible or odorous indications of contamination. Verify that the level of the UST is checked before a transfer is made and that the volume available in the tank is greater than the volume of the product to be transferred to the tank. Verify that the transfer operation is monitored constantly. (12) 40 CFR 280.30 (a)

DETAILED INSPECTION CHECKLIST

- E. Request records to demonstrate overfill prevention equipment (e.g. automatic shutoffs, alarms) have been tested to ensure equipment is operating properly. List the most current inspection date. (13)
- F. Review UST system repair records, then summarize the repairs for each tank this year, and ensure tanks were tightness tested within 30 days of repair. Inspect the soil and ground surrounding these UST tank(s) to ensure no visible signs of stained soil, and if visible signs – describe soil. (8)
- G. Review spill and overflow reports to determine what actions were taken if a leaking UST was detected to ensure compliance. (14)
- H. Request to review UST Operator Class A, B. and C training records for fuel farm personnel that manage the USTs.

Reference

(1) 40 CFR 280.42(B); (2) 40 CFR 280.20 (A); (3) 40 CFR 280.22; (4) 40 CFR 280.31; (5) 40 CFR 280.45; (6) 40 CFR 280.21(B); (7) 40 CFR 280.43(C); (8) 40 CFR 280.33(D); (9) 40 CFR 280.33(F); (10) 40 CFR 280.74; (11) 40 CFR 280.63, 280.66; (12) 40 CFR 280.30 (A); (13) 40 CFR 280.20(C); AND (14) 40 CFR 280 SUBPART E

131 16 012 BURIED ONSITE PIPELINES

- A. Determine if the buried steel pipelines have cathodic protection. Protective wrapping and coating required for new or replaced pipeline after 16 August 2002. (1) (2)
- B. Review the records of the last 3 cathodic protection inspections for buried steel pipelines. Write down the frequency of which the inspections were performed. (3)
- C. Indicate if the pipelines are pressurized or suction piping. (4)
- D. Review the records for buried pipeline automatic leak detection monitoring or integrity tightness testing (required at time of installation, modification, construction, relocation, or replacement). Ensure site has records for at least 1 year, and if any calibration or maintenance was required, ensure records are kept for 5 years.. (2) (5) (6)

Reference

(1) 40 CFR 280.20(B); (2) 40 CFR 112.8(D); (3) 40 CFR 280.31; (4) 40 CFR 280.41(B); (5) 40 CFR 280.44; AND (6) 40 CFR 280.45

131 16 013 ABOVEGROUND ONSITE PIPELINES

- A. Observe fill pipe areas for leaks.
- B. List when, if any, pipelines have been repaired.

DETAILED INSPECTION CHECKLIST

- C. Review the records of aboveground pipeline inspections. Ensure the following are inspected: pipe supports, connecting joints, valves, gauges, pumps, appurtenances, and catch basins). List how often inspections are completed. (1) (2)
- D. Inspect lines that have been out-of-service for extended periods and note if they are capped, blind-flanged, or other, and specify if the pipeline has been marked when the date taken out of service. (3)
- E. Review the aboveground pipeline design specifications and confirm with FMO to ensure there are: (4)
 - (1) Functional expansion relief valves that bleed over-pressurized product back to the tank;
 - (2) Operational emergency shut-off valves or impact valves in the pipeline (sometimes at the tank or product dispenser); and
 - (3) Vapor- and liquid-tight pipe joints if transporting flammable and combustible liquid.
- F. Verify what types of leak detection methods are employed: line leak detectors, alarms, tightness testing, soil vapor monitoring, groundwater monitoring, interstitial monitoring, etc. (4)

Reference

(1) 40 CFR 112.7(E); (2) 40 CFR 112.8(D)(4); (3) 40 CFR 112.8(D)(2); (4) 29 CFR 1910.106(C)(3)

131 16 014 OFFSITE OR CROSS-COUNTRY PIPELINES

- A. Do offsite or cross-country pipelines have link markers or signs? (1)
- B. Review records for the offsite pipelines pressure tests. (2)
- C. Review records to ensure pipelines in high consequence areas have been integrity-tested in the past 5 years. (3)
- D. Determine if the offsite pipelines have breakout tanks or pump stations. If they do, determine if the breakout tanks and pump stations are provided with:
 - (1) Firefighting equipment; (4)
 - (2) Overfill protection system; (5)
 - (3) Signs with the operator and emergency contact phone numbers. (6)
 - (4) No smoking signs. (7)
 - (5) Security to protect from vandalism and unauthorized entry. (8)
- E. Review maps of the pipeline system to verify they are current. (9)

DETAILED INSPECTION CHECKLIST

- F. Request to see the manual of written procedures for conducting normal operations, maintenance activities (e.g., pressure test results), and handling emergencies. (10)
- G. If pipelines are in highly populated areas, ecologically sensitive areas, or near navigable waterways, ask to see the written integrity management program. Applies only to pipelines of 500 miles or more, or any pipeline built after 2001. (3)
- H. Review the written continuing public education program to determine if it is consistent with API Standard 1162. (11)
- I. Review the written damage prevention program to ensure it addresses the dangers of excavation near the pipeline. (12)
- J. Review the written operator qualification program. (13)
- K. Review training records to ensure employees are given emergency response training annually. (14)
- L. Check records and ask if offsite or cross-country pipelines are inspected every 2 weeks. (15)
- M. If pipelines go under navigable waters, check records to see if they are inspected every 5 years. (16)
- N. Review records to see if pipeline valves inspected and maintained every 6 months (17)
- O. Review records to see if breakout tanks are inspected annually. (18)
- P. Review, if any Safety-Related Condition reports submitted for corrosion damage, material defects, pipeline movement (e.g., from earthquakes or floods), or malfunctions. (19)
- Q. Review pipeline pressure test results; should keep the records for as long as the facility is in use. (20)
- R. Review the annual report and/or the DOT form RSPA F 7000–1.1 submitted to the Pipeline and Hazardous Materials Safety Administration (PHMSA) and ensure the document(s) were submitted by June 15. (21)

Reference

(1) 49 CFR 195.410; (2) 49 CFR 195.302; (3) A. 49 CFR 195.452 (J); (4) 49 CFR 195.430; (5) 49 CFR 195.428; (6) 49 CFR 195.434; (7) 49 CFR 195.438; (8) 49 CFR 195.436; (9) 49 CFR 195.404; (10) 49 CFR 195.402; (11) 49 CFR 195.440; (12) 49 CFR 195.442; (13) 49 CFR 195.505; (14) 49 CFR 195.403; (15) 49 CFR 195.412(A); (16) 49 CFR 195.412(B); (17)

DETAILED INSPECTION CHECKLIST

49 CFR 195.420(A-B); (18) 49 CFR 195.432(A); (19) 49 CFR 195.55; (20) 49 CFR 195.310; (21) 49 CFR 195.49

131 16 015 FUEL LOADING AND UNLOADING AREAS

A. Inspect loading areas for:

- (1) Roofs;
- (2) Curbing or a containment system; and
- (3) Floor drains. If yes,
- (4) Determine where floor drains discharge: (1)

B. Verify that any containment system is designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility. (1)

C. Determine if there is signage warning vehicles to avoid endangering piping and transfer operations. If no signage, ask if a fuel terminal representative greets each vehicle and warns them instead. (2)

D. Inspect starter control pumps to ensure they are locked in the off position. (3)

E. Ensure that starter control pumps are in an area restricted to authorized personnel (signs posted, fencing/locks/barriers). (3)

F. Prior to truck or rail car filling and departure, are drains, outlets, and overfill protection (Scully System) inspected and secure? (4)

G. Indicate what means there are of preventing a vehicle from leaving before completely disconnecting from fuel transfer lines (warning lights, signs, physical barriers, etc.). (5)

H. Ensure emergency shutoffs are accessible and well-marked.

I. Ask what the procedures are when unloading pipeline connections are taken out of service for an extended period of time. (Response should be connections are securely capped or blind-flanged). (6)

Reference

(1) 40 CFR 112.7; (2) 40 CFR 112.8(D)(5); (3) 40 CFR 112.7(G)(3); (4) 40 CFR 112.7(H)(3); (5) 40 CFR 112.7(H)(2); (6) 40 CFR 112.8(D)(2)

131 16 016 GASOLINE DISTRIBUTION TERMINAL (20,000 gallons or more)

A. Determine if the facility receives gasoline by pipeline, ship or barge. (1)

B. Review the records of leak inspections for the loading rack and vapor collection system to verify they are conducted monthly and are kept on

DETAILED INSPECTION CHECKLIST

file for 2 years. Ensure the inspections include: date of inspection, findings (may indicate no leaks), leak determination method, corrective action, and inspector name and signature. (2)

- C. Request to see the tank truck vapor tightness documentation to ensure the facility keeps these documents on file in a permanent form (hard-copy or electronic) available for inspection. Records shall be updated once a year to reflect current test results. (3)

Reference

(1) 40 CFR 63 SUBPART R; (2) 40 CFR 60.505(C); (3) 40 CFR 60.505(A-B)

131 16 017 HAZARDOUS WASTE MANAGEMENT

NOTE: These questions are specifically for the fuel farm. If your POL site(s) does NOT contain any hazardous waste storage areas, satellite accumulation drums, etc., this section is NOT APPLICABLE.

- A. List the facility's EPA Identification Number if the facility has one.
- B. Request current records that document where all regulated hazardous substances are located at the fuel farm. (1)
- C. Review hazardous waste management awareness [HAZWOPER] training records to ensure training is conducted annually. (1)

D. SATELLITE ACCUMULATION DRUMS (2) (3)

- A. If the site has a satellite accumulation drum for collecting hazardous waste, inspect the area and the drum.
- B. Ensure the drum is located where it can be observed and monitored by the generator or operator.
- C. Ensure the drum is marked with the words "Hazardous Waste" and a placard or label that lists the wastes in the drum.
- D. Ensure the drum is closed unless someone was adding or removing waste when you visited.
- E. Ensure emergency information (e.g. name and no. for fire department, and the Qualified Individual (QI) is posted near the phone closest to the hazardous waste drum.
- F. Ensure emergency equipment is available near the hazardous waste drum (e.g. fire extinguishers, spill control supplies, absorbents, MSDSs).

References

(1) 40 CFR 265.16(c), (2) 40 CFR 262, (3) 40 CFR 265

DETAILED INSPECTION CHECKLIST

131 16 018 ACCUMULATION OR STORAGE AREA FOR SQG AND LQGs (Indoor and Outdoor)

- A. Determine if the hazardous waste accumulation area is clearly identified (e.g. signage, roped off or line demarcating where area is). (1)
- B. Examine hazardous waste containers to make sure they are closed. (1)
- C. Inspect the hazardous waste storage area to see if it has secondary containment. (1)
- D. Inspect the aisles to ensure there is sufficient space in the hazardous waste storage area to allow unobstructed movement of personnel and equipment. (1)
- E. Review the hazardous waste container labels to ensure that either the date accumulation began or the date when the satellite accumulation area drum became full is included. (1)
- F. Request to review the manifest that shows the hazardous waste containers and the storage area are inspected weekly (e.g. a weekly inspection checklist, records/copies of past inspections). (1)
- G. Determine if there are any ignitable or reactive hazardous wastes on site; this should be indicated on the label of the container along with MSDS sheets on file, on site. Then make sure these containers are stored at least 50 feet from the property line. (1)
- H. Ensure the hazardous waste accumulation area is equipped with and personnel are trained to use: (1)
 - (1) Internal communication system or alarm system;
 - (2) Telephone or two-way radio;
 - (3) Portable fire extinguishers or fire control equipment;
 - (4) Spill control equipment;
 - (5) Decontamination equipment; and
 - (6) Water or adequate volume for hoses, sprinklers, or water spray systems.
- I. Determine the last date the emergency equipment was tested to ensure proper operation (should be within the last year and recorded either on the equipment or on record in files). (1)
- J. Which local authorities has the facility made arrangements to familiarize them with the characteristics of the facility (e.g. Fire Dept., Other responders)? (1)

DETAILED INSPECTION CHECKLIST

- K. Request to view the agreements, if any that are in place with emergency response contractors and equipment suppliers. Identify name(s) and number(s) here. (1)
- L. List the name and contact number of the hazardous waste emergency coordinator (employee on the premises or on call with the responsibility of coordinating hazardous waste emergency response measures). Ensure this is posted by the nearest phone to the waste storage area. (1)
- M. Verify on the facility's hazardous waste manifests that the facility has a certified waste minimization program in place. (2)

Reference

(1) 40 CFR 265; AND (2) 58 FR 31114

131 16 019 TRANSPORTATION OF HAZARDOUS MATERIALS

- A. Obtain the record of current training [U.S. DOT packaging, labeling, marking, placarding, and shipping paper requirements], inclusive of the preceding three years, for each employee that prepares hazardous materials for shipment (drums, packages, tankers). The record should include: the employee's name, most recent training completion date; a description, copy, or location of the training materials used to meet the specified requirements; name and address of person providing the training; and the certification that the hazmat employee has been trained and tested. (1)
- B. Review several facility shipping papers and make sure the 24-hour emergency response telephone number was identified on each shipping paper. (2)
- C. Confirm facility personnel verify that each transporter carries written emergency response information for each hazardous material being transported to or from the facility By asking a random selection of personnel which transporters should carry emergency response information (answer is: all transporters carrying hazardous material). (3)
- D. Identify the location within the facility where placards to offer the carrier/transporter are located and request to see them. (4)
- E. Ask facility personnel if prior to leaving the facility, each transport vehicle has appropriate placards and where these would be located. Answer: on each side and each end for trucks, rail is different. (5)

Reference

(1) 49 CFR 172.704; (2) 49 CFR 172.604; (3) 49 CFR 172.602; (4) 49 CFR 172.504; (5) 49 CFR 172.506

DETAILED INSPECTION CHECKLIST

131 16 020 NON-HAZARDOUS WASTE MANAGEMENT

- A. If the facility handles oil or grease, check around to make sure the facility: (1)
- (1) Labels waste oil containers as "Used Oil";
 - (2) Verifies containers are in good condition (not leaking, bulging, rusting, damaged, or dented); Stores the used oil containers inside; or
 - (3) If outside, note if there is secondary containment around the container (required if the facility has an SPCC plan); and
 - (4) Recycles the used oil.
- B. Determine if the facility has set up a waste management program for universal wastes, if applicable, for such as light bulbs, ballasts, and thermostats. (2)
- C. Ask a sample of employees what are the proper handling and emergency procedures for universal wastes (batteries, pesticides, mercury thermostats, lamps) or where they would go to find out how to dispose of these items. (3)

Reference

(1) 40 CFR 279.22; (2) 40 CFR 273 Subpart B&C; AND (3) 40 CFR 273.16

131 16 021 RESPONSE TRAINING AND EXERCISE PROGRAM (PREP), required for FRPs

- A. Provide documentation that the facility participates in spill response exercises, including notes on the quarterly Qualified Individual Notification Exercise.
- B. Provide documentation on the three most recent facility spill management team tabletop exercises.
- C. Determine if one of the tabletop exercises in the past 3 years involved a worst-case discharge exercise.
- D. Provide documentation on the three most recent semi-annual equipment deployment exercises.
- E. If the facility is a marine terminal, ensure that one of the tabletop or equipment deployment exercises was an unannounced exercise for each of the three years..

Reference

MCO P5090.2A 7104.8; 33 CFR 154.1055; AND 40 CFR 112.21 (FRP)

DETAILED INSPECTION CHECKLIST

131 16 022 REMEDIATION

- A. When walking the site, look for areas of stained soil or dead vegetation. Inquire about the status of these areas, if sampling has taken place, and is remediation lined up.
- B. Determine if the remediation activity is being performed under CERCLA/Superfund or under the RCRA corrective action process.
- C. Determine the number of groundwater monitoring wells at the facility, if any.
- D. Determine if and when subsurface soil investigations were conducted or if any are scheduled.
- E. Determine if and when treatment systems were installed or operated at the facility.
- F. Determine if USTs were removed, when they were removed, and if sampling was done to ensure no contamination of soil or groundwater. Provide documents or data to demonstrate this.
- G. Verify that installations retain a permanent closure, site assessment, site characterization, and corrective action records for at least 50 years to ensuring protection of soil, surface water, and groundwater and protect the Navy from potential liability.
- H. Verify pipelines and ancillary equipment were either removed or capped, blank flanged, and records of action taken during closure are kept for 50 years after a POL tank closure.

References

(1) 40 CFR 300; (2) 40 CFR 264; and (3) 40 CFR 63, Subpart GGGGG

131 16 023 STORMWATER MANAGEMENT

- A. Identify the nearest surface water by name (including distance and direction)
- B. Is the facility in a 100-year floodplain?
- C. Are there any storm water retention ponds on-site?
- D. Provide a copy of the permits for storm water, oil/water separators, and other wastewater discharges from your state or regional agency, if applicable. Review permit to determine if the permit includes requirements for storm water discharges and ensure these requirements are being met.

DETAILED INSPECTION CHECKLIST

- E. Determine if the SWPPP is site specific to the fuel farm, Base-wide, or regional.
- F. Are employees familiar with the Best Management Practices (BMPs) within the SWPPP? Ask a random sample of employees if they are familiar with the SWPPP, where it is located, and what some of the BMPs associated with the SWPPP are.
- G. Request to view a training attendance sheet and presentation notes/slides, if available, for the last 3 years where the following activities were addressed, as applicable: used oil and spent solvent management; wastewater sampling; storm water pollution prevention; fueling procedures; general good housekeeping practices; agency reporting; and used battery management.
- H. Request to view documentation for inspection of areas listed in the SWPPP, including storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Reference

Multi-sector General Permit Part 8, Subpart P; and
http://www.epa.gov/npdes/pubs/msgp2008_part8.pdf

NOTE: Stormwater management is regulated by the state or regional water quality agency, with EPA retaining oversight authority. Check with your state or regional agency for specific requirements.